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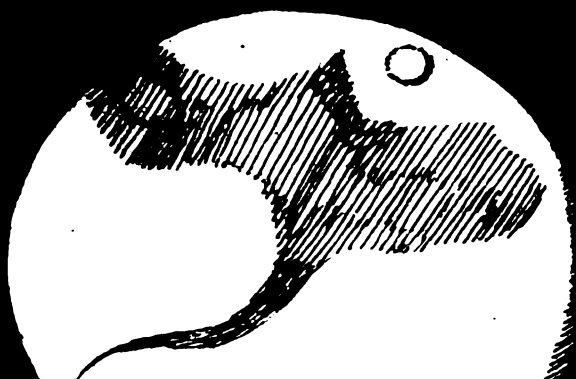
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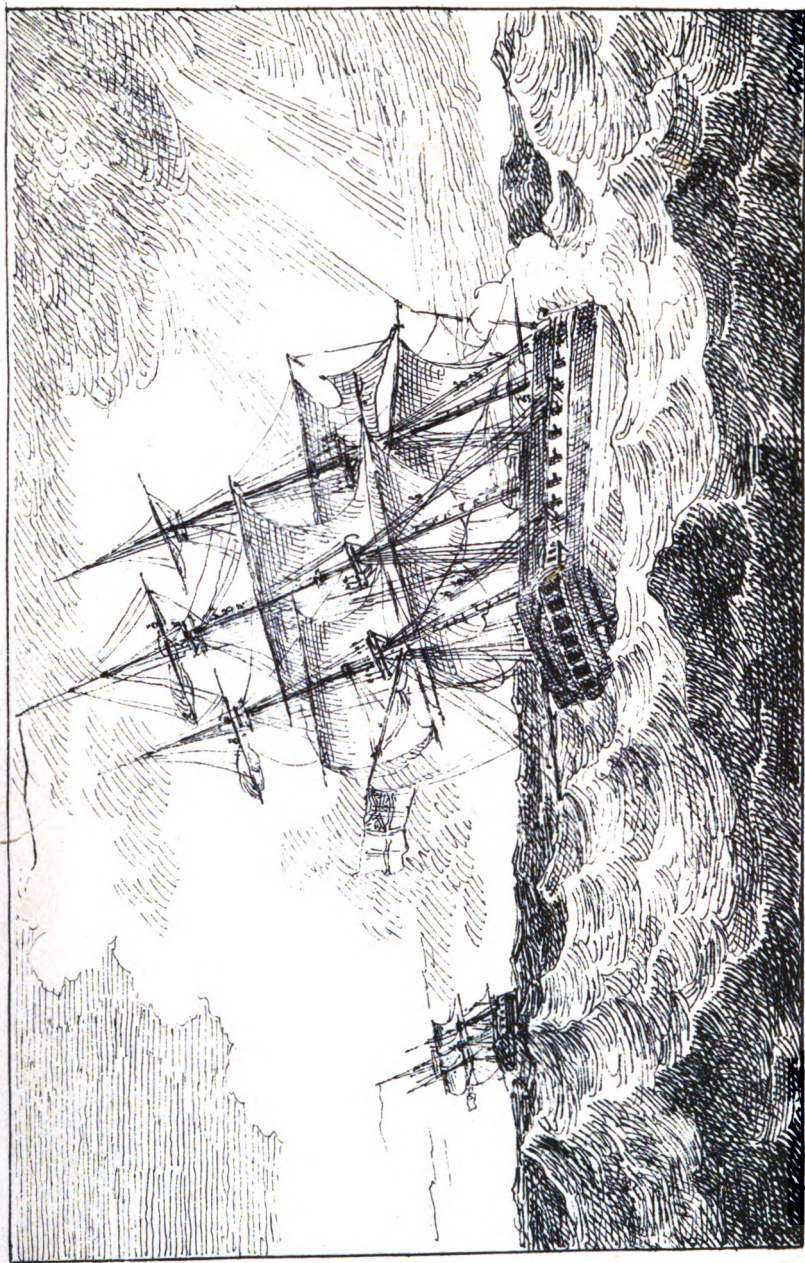
*A brief account of
the solar system in English*

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1918



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A
BRIEF ACCOUNT
= OF
THE SOLAR SYSTEM,
IN ENGLISH;
WITH
THE TRANSLATION INTO HINDUSTANI,
EXPRESSED IN THE ROMAN CHARACTER.
—♦—
ARRANGED AS READING LESSONS
FOR
The Use of Schools.
—♦—

“ The heavens declare the glory of God,
“ And the firmament sheweth his handy work.”
“ Day unto day uttereth speech,
“ And night unto night proclaimeth knowledge.”
“ The worlds were framed by the word of God.”
“ He hangeth the earth upon nothing.”
“ By his Spirit he hath garnished the heavens.”

Calcutta:

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PREFACE.



THE knowledge of the West, as it regards the East, is now sealed up in the languages of Europe; and the most important step towards bestowing upon India the moral treasures of the civilized world, is to open, as extensively as possible, the *mines from whence instruction may be drawn*, that the people may enrich themselves.

English, being the language of the rulers of India, must be the chief *depository* from whence those treasures can be obtained ; and the more that language is put in possession of the intelligent amongst the people, the more rapidly will they transfer the new and regenerating wisdom, which it contains, into the circulating medium of the country, *the vernacular languages, the only channels through which moral and intellectual improvement can reach the mass of the inhabitants.*

It seems most desirable, therefore, that means should be multiplied to facilitate the study of English, and that care be taken, even in the mechanical process of *learning the language*, that the scholar should, at the same

time, be enlarging his mind, and improving his heart by the lessons taught. Much benefit may be expected to result to the inhabitants of *India* from the study of *Astronomy*, because the native mind is at this moment, from the Prince to the peasant, in the daily affairs of life, blindly guided by the movements and positions of the planets in the heavens, to an extent of which the European mind has but a feeble conception : it seems then of importance, that just ideas should be imparted of the planetary system, now exercising an influence so powerful upon almost every family in the land.

There is scarcely any village throughout India, however poor, which does not maintain its *astrologer*, who is usually a Brahmin, to consult the position of the planets, and to dictate to the inhabitants the propitious times and seasons for all their important undertakings, or whether they should be pursued or abandoned.

There are, of course, many exceptions; but, speaking generally, it may be said, that the humble cultivators of the soil venture not to follow the counsels of their own judgment and matured experience, of the fittest times and seasons ; but before presuming even to plough

their fields, must first ascertain the position of the planets, by consulting the village astrologers, who, spreading out their mysterious books, calculate the conjunctions of the heavenly bodies, and dictate to the submissive ryots, when they shall break up the soil, and often, when they shall consign the seed to the earth !

In like manner, if a house is to be built, if a journey but of two days' duration is to be undertaken, *Reason's* voice must not be heard, the *astrologer* must determine the propitious seasons for such undertakings.

The most important events in life literally depend upon the calculations and judgment of the *astrologer* ; for who, amongst the inhabitants of India, would venture to contract a marriage, the most momentous alliance in existence, without taking counsel from *astrology** ?

* A few facts will best illustrate this. An instance has just happened (and such are of daily occurrence) where a respectable Hindoo (who could be named) desirous of marrying, sought alliance successively with no less than *four* different families,—all willing that the marriage should take place ; but, alas ! on consulting the astrologer, on the first occasion, it was discovered, from comparing the natiivities, that the planet Saturn was in the constellation Virgo, and that Mars was in the same quarter of the heavens, and

Thus, speaking generally, it may be said, that from the peasant in his field to the Ruler on his throne, from the ploughing of the soil to the movements of an army, *Reason* must be dethroned, and bow submissive to the despotism of *astrologers*.

that nuptials between such nativities would be unblessed with offspring ! On the negotiation with the *second* family, the planets Saturn and Mars threatened *death* to the husband ! On the *third* occasion, the relentless astrologer foretold from the planets, that “ *mutual enmity* ” would embitter the alliance formed under such conjunctions of the stars ! And in the *fourth* instance, the threat of *death* to the bridegroom blasted again his hopes of happiness !!

The young man himself, placing no faith in astrology, remonstrated against such fanciful obstacles to his hopes and union ; but the parents, sacrificing their own judgment, abandoned the happy prospects of their children, and surrendered their reason to the dictates of the *astrologer*. At length, in the negotiation with a *fifth* family, the planets were favorable, and the parties were betrothed. But here again the influence of astrology interfered in a manner which may be mentioned, to shew the *extent of controul* exercised over the people by the priesthood, in whose hands are the mysteries of *astrology*. The wedding garments for the bridegroom and the bride, and for her establishment, were to be prepared. An event so important as this could not be undertaken without consulting the astrologer ! the needles of the tailors could not be plied, if the mighty unconscious planets, rolling in their courses, were deemed unfavorable ! The mistaken sage referred to his books, and to the stars, for the propitious time ; and dictated,

It appears then of importance, that just views should be communicated of *Astronomy*, from which science *Astrology* has sprung ; of the nature and movements of the planets, that the inhabitants of India may judge for *themselves* how far the predictions of the ignorant astrologers entitle their divination to belief; how far, in the daily and most momentous events of life, the calm dictates of *reason*, *feeling*, and *experience* should be set aside, because Jupiter is in Leo, or the moon in Scorpio !

that the clothes could not even be commenced upon until within six days of the marriage. The young man proposed to his parents to set aside the astrologer's prediction, as six days was quite inadequate to prepare the dresses requisite ; but the parents overruled the impatience of their son, and would allow of no deviation from the dictate of the astrologer ; so that the young man was obliged to postpone the operations of the tailors, and actually to take a party of them with him on his journey, to fetch his bride, to have them ready with their needles, to begin with alacrity their work, the moment time had reached the predicted and propitious hour named by the astrologer, when the sewing might, with safety, commence ! The young man has had the advantage of education, both in the Persian and English languages, with both of which he has a fair acquaintance, and he has had much association with Englishmen. If, notwithstanding these advantages of *education*, astrologers have had such power over *him*, what must be their influence over the people generally !

The more intelligent amongst the inhabitants now venture to question the learning of astrologers, and to scrutinize in some degree their divinations. Let such be encouraged to study *the science on which astrology is pretended to be based*, and they may then have the gratification of drawing just conclusions for themselves.

Astronomy, more than any other science, conveys to the mind just views of the power and glory of the Creator; for “the heavens declare the glory of GOD, and the firmament showeth the work of HIS hand.” The study of the most stupendous works of the Creator must greatly tend to remove those mean and degrading ideas of HIS power and attributes which too generally prevail.

Especially in this land, therefore, no school surely should be without such instruction, as, without occupying the scholar’s time, or impeding his more important studies, tends at once to create awe and reverence to the CREATOR, to rectify popular errors, to gratify the scholar, and enlarge whilst it corrects his mind : for the mechanical art of reading must be taught by the perusal of some book or other, and how many of our Primers teach mere words with-

out ideas, or if ideas, puerile, and not such as shall fortify the young mind against the influence of the ignorant, or the designs of the crafty.

Whilst books of instruction in the Indian languages are so few, the most humble contribution may be useful; this Primer has, therefore, been prepared, as a mite towards the instruction of the people.

It has been arranged as a class book for the use of schools, with the view of affording facility to the study of the English and Hindustáni languages, by giving the aid of a translation of both in the opposite pages, with a translated vocabulary of the chief words, so that the learner may instruct himself, with very little aid from the teacher, and that the drudgery of the native student, in his daily task, whilst acquiring a language, may be relieved by the interest and pleasure he may be supposed to experience, whilst his mind expands to grasp the glorious truths which ASTRONOMY reveals; and that *whilst learning a language*, he may then insensibly be acquiring *ideas* which shall, through after life, enable him in many important matters, to judge for himself, between truth and error.

It would be ungrateful not to mention here, that this little work has been printed at the expense of the King of Oude, and will, by the same liberality, be distributed gratuitously to seminaries of instruction, where it may be required.

WAJIB HAI MUSANNIF PAR,
BAYAN SHUKR GUZARĒ ĪNAYAT BADSHAHĒ KĒ,
KI YIH KITAB,
JANABABUNNASR, QUTABUDDĒN, SULEMANĪJAH,
SULTAN I ĀDIL, NAUSHIRWAN I ZAMAN,
NASARUDDĒN HAIDAR
BADSHAH I AUDH KĒ MARAHMAT

AUR IMDA'D MASA'RIF SE CHHA'PA' KĒ GAI', AUR AB TAQSI'M
KĒ JAEGI' MADRASON AUR MAKTAB KHA'NON MEN, JIS
JAGAH ZARURAT KUTUB KĒ HOGĒ'.

A BRIEF ACCOUNT

OF

THE SOLAR SYSTEM,

IN

ENGLISH AND HINDUSTANI.

INTRODUCTION.

**“WHAT an august, what an amazing conception, if
“ human imagination can conceive it, does astronomy
“ give of the works of the Creator !”**

**“ Thousands of thousands of suns, multiplied with-
“ out end, and ranged all around us, at immense
“ distances from each other, attended by ten thou-
“ sand times ten thousand worlds, all in rapid mo-
“ tion, yet calm, regular, and harmonious, invaria-
“ bly keeping the paths prescribed to them ;” and
these worlds peopled with intelligent beings, formed
for the worship of the Creator.**

TAMHID.

Jo jo shakhs ilm i haiat ke daqaiq se bikamār wāqif howegā, khāliq kī masnūāt par kyā kyā afrīn aur istiajāb karegā ! balki qiyās jāri hai, ki to bhī, un masnūāt ko qarār i waqif na samjhegā.

Hazār hā āftāb āspās, idhar udhar, muālaq, ek dūsre se be nihāyat mufāsale par, aur unkī taīnāt men be-shumār dunyā tez harakat hain ; aur jo daurī un ke wāste muqarrar hain, un men sāth amn o āmān ke, sāzgārī aur barābarī se, ye sab dunyā gird karne-wāle hain : aur haiwānāt zī aql o shūr se ābādān hain, wāste khāliq kī bandagī karne ke, aur kabhī apnī daurī se talne wāle nahīn hain.

**A BRIEF ACCOUNT
OF
THE SOLAR SYSTEM,**

DIVIDED INTO SHORT SENTENCES, IN ENGLISH AND HINDUSTANI.

FROM the contemplation of the heavenly bodies, the moon, the planets and the stars, we learn the awful power and majesty of God, who made and constantly superintends the whole.

The following is a brief description of the solar system :—

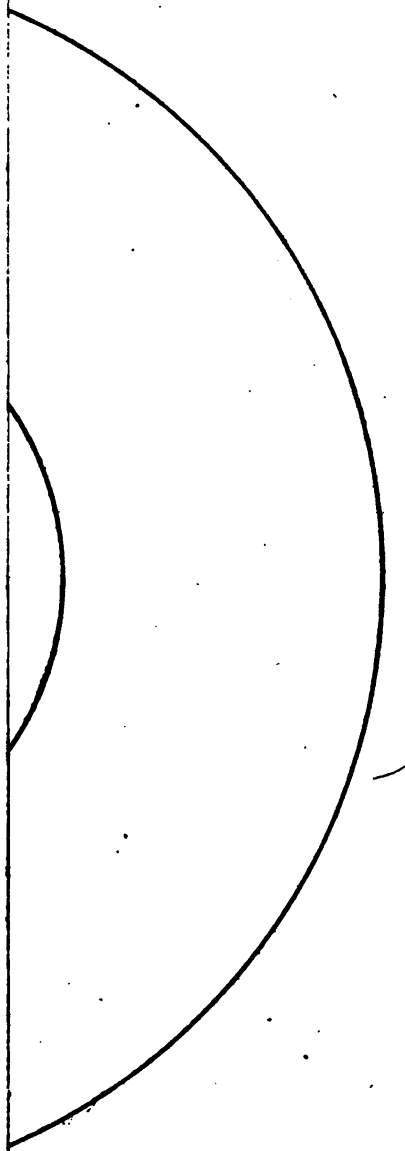
The sun, with the earth, the planets and comets, which move round him as their centre, constitute the solar system.

The Creator has placed the sun nearly in the centre of all the planets which move round him. (See the plates.)

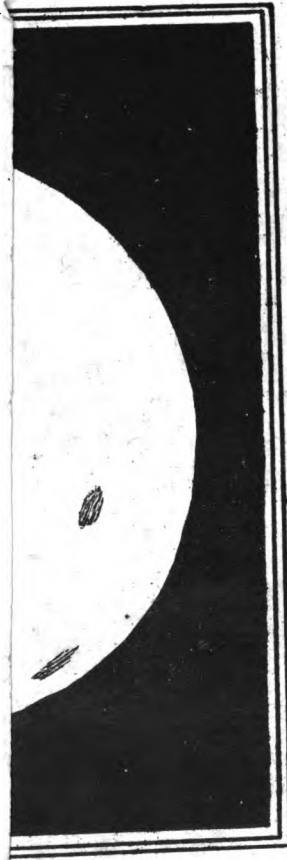
The sun gives light and heat to this earth and all the planets: without the sun, universal darkness would prevail.

The diameter of the sun is calculated by astronomers to be 7,63,000 miles. He is made to turn round on his axis once in 25 days. His distance from the earth is 95 millions of miles.

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آفتاب
Sun.



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YIH MUḤHTASAR BAYĀN

ILM I HAIAT KĀ,

TAQSIM KIYA GAYA, CHHOTĒ JUMḤON MEN, BICH ZABAN URDU' AUR ANGREZI KE.

IJRA'M falakī, yāne chānd, aur saiyāron, aur sitāron ke mulāhaze se, *Ḳhudā kī qudrat haibatnāk* aur *pur jalāl*, daryāft hotī hai, ki jo sab ko banākar, mudām ḵhabardārī kartā hai.

Yih muḤhtasar bayān ilm i haiat kā hai.

Āftāb, aur kurah i zamīn, aur saiyāre, aur zū-zūwābe, jo ki is āftāb ko markaz jānke gird us ke mutaharrik hain, unhon kī hālāt par qā'idah shamsī mushtamil hai.

Ḳhudā ne āftāb ko tamām saiyāron ke, jo ki uske āspās gardish karte hain, baqarīne ausat men rakhā hai. (Naqshe par nazar karo.)

Is zamīn, aur sab saiyāron ko, āftāb roshanī, aur garmī detā hai. Agar sūraj na hotā to bilkul andhiyāre rahte.

Ahli haiaton ne āftāb ke qutr ko, sāt lākh tirsath hazār mailz bisāb kiya hai. Pachīs roz men āftāb apnī mihwar par ek daurā tamām kartā hai. Zamīn se wuh nau karor, pachās lākh mailz dūr hai.

Astronomers make these calculations with mathematical certainty, calculating also exactly when eclipses of the sun and moon will take place.

This earth compared with the sun is about the size of a pea, the sun being as large as a ghura, or water vessel.

A cannon shot in travelling from the sun to the earth would be more than 19 years in reaching us !



The apparent smallness of the Sun, Moon, and Planets, explained,



THE reason why the sun, the moon, and the planets, though vast worlds, appear so small to us is this ; that the farther objects are moved from the eye, the smaller they appear ; as a very simple illustration of this, look at the picture of the balloon. When close to us see what an immense thing it is ! towering above the crowds which have assembled to see it rise ; two men sit in the car attached to it, and it lifts them up with ease into the sky !

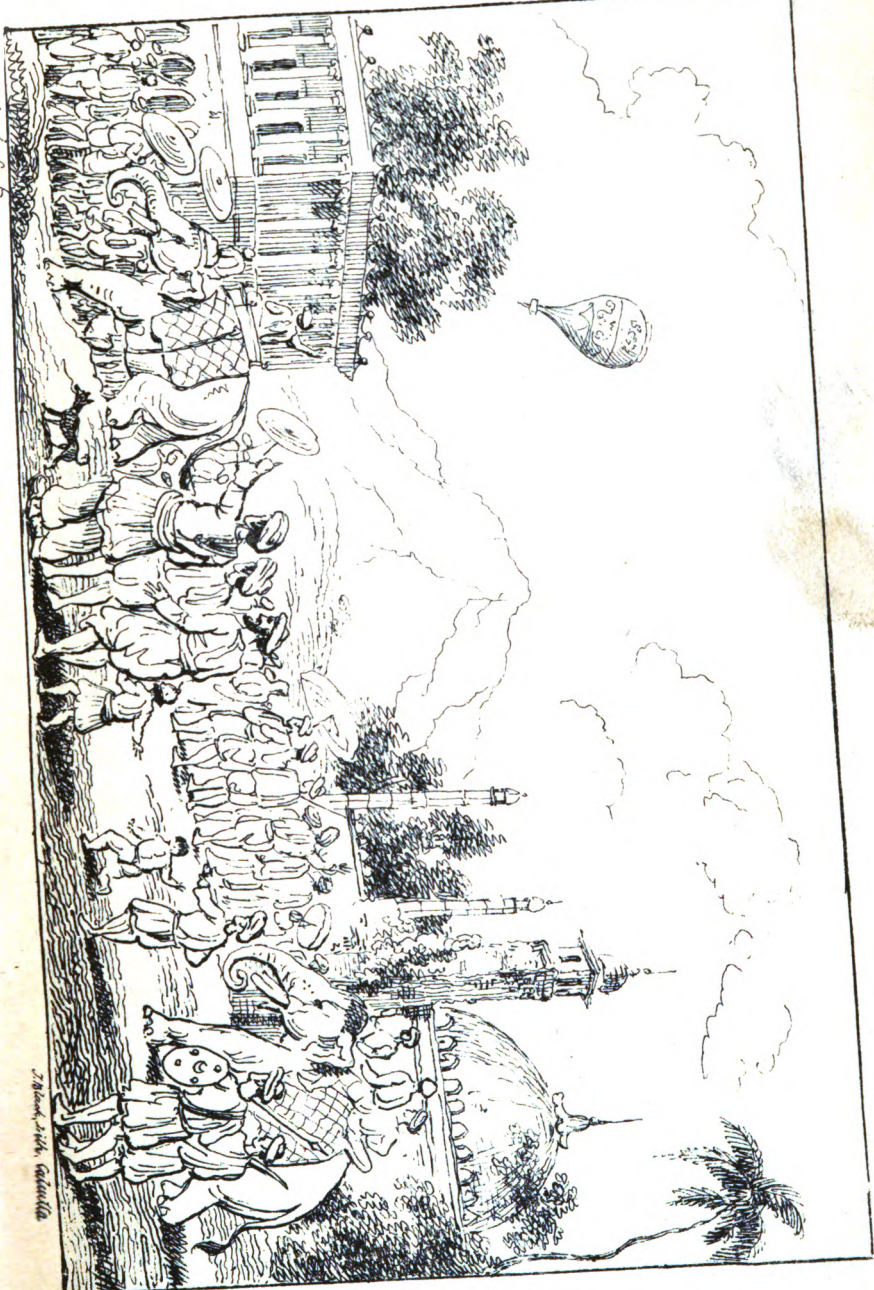
See it again, when it has ascended some height from the earth, how small it appears ! The two men in it can scarcely be seen waving their flags ! Look once more ! the vast balloon is a mere speck in the blue firmament far above the clouds !

Now you can easily imagine how those vast worlds, the sun, moon, and planets, appear so

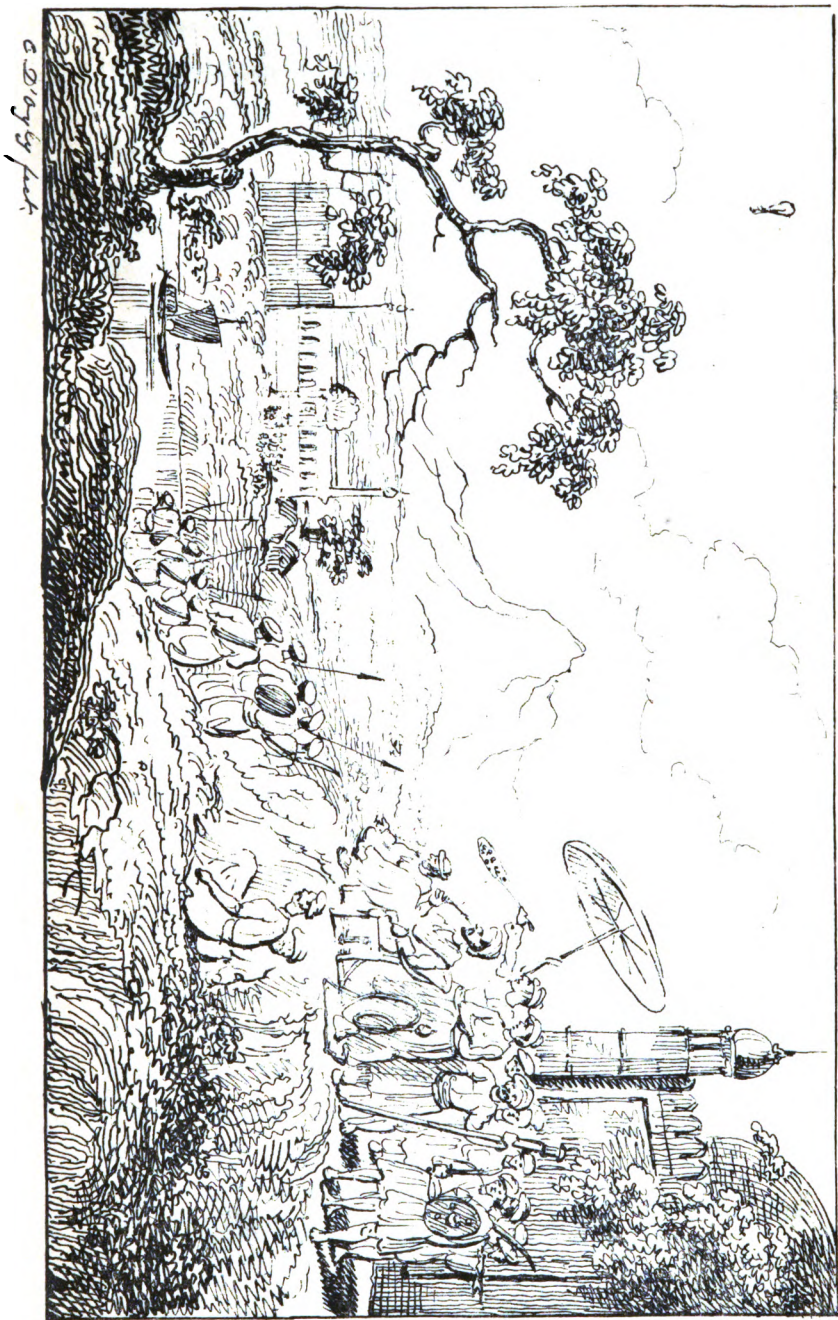
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C. D. by J. J. J.

Abli haiaton ne is hisáb ko, jaisí tahqíq ilm ri-yází men hotí hai, waisáhi tahqíq kiyá hai, aur we thík kah sakte hain ki kab súra j aur chánd ko grahan hogá.

Agar áftáb ke andáze ko ghare barábar samjho, to zamín ká andázah maṭar *barábar* samajhná ! Zamín áftáb ke muqábale men yihí nisbat rakhtí hai.

Agar áftáb par se top chhorí jáwe, to zamín talak golá uská unnís baras men nahín pahunchegá !



*Súra j, aur Chánd, aur Sitáron ke chhoṭe nazar
áne ke sabab men.*

Súra j, aur chánd, aur sitáre, ki har ek dil men, niháyat bare jahán hain, is qadar chhoṭe nazar áte hain ; sabab uská yih hai, ki jo chíz jis qadar dúr hotí hai, waisehi chhoṭí dekh partí hai. Yih hál achehi tarah samajh men áta hai, ghubáre kí charbái dekhne se. Jab talak ki wuh nazdík hai, tamásháton ke sir par se charhtá húa hawá par, kitná bahut bará nazar áta hai. Do ádmí uske laṭkan takht men baiṭhe hain, aur unko ásaní se ásmán par lejáta hai !

Phir tum nigáh karo, jad ásmán men kuchh dúr gayá to kaisá chhoṭá dekh partá hai ! aur we donon ádmí jhandiyán hiláte hue, kaisí mushkil se nigáh men áte hain ! Phir dekho ! us bare ghubáre ko, bích níle ásmán ke, aur bádal se bahut upar, faqat ek nuqtah kí mánind nazar áta hai !

Ab tum ásaní se málum kar sakte ho, ki súraj, aur chánd, aur sitáre, jo haqíqat men niháyat bare hain,

small, because they are at such an inconceivable distance from us that a cannon shot would take years and years to reach them. The wonder is that we see them at all; were they not such enormous worlds they would be lost from our sight. The contemplation of these things leads the mind to worship the great invisible Being who made and now sustains them all, and whom we ought to worship and obey.

MERCURY.

1. THE planet placed by the Almighty nearest to the sun, is named Mercury: you may see him with the telescope, and sometimes with the naked eye.

2. His distance from the sun is 37 millions of miles.

3. His diameter is 3,200 miles, and he wheels round the sun once in 87 days, 23 hours.

4. He is made to travel at the fearful velocity of 105 thousand miles every hour.

5. Because he is much nearer to the sun than we are, the sun appears to his inhabitants, if they see as we do, seven times as large as to us; and the heat, if Mercury be such a world as ours, is seven times as great there as that which we feel here.

chhoṭe nazar áte hain; uská bájs yih hai, ki we ham se niháyat dūr hain, yihán tak, ki golah top ká sálhá sál men bhí un tak na pahunch sake. Tájjub yih hai, ki we kuchh nazar áte hain. Agar we is qadar bahut bare na hote, to hargiz nazar na áte. Aisi báton ke sochne se, yih dil Kḥudá kí taraf játá hai, jis ne in sab ko banáyá hai, aur unhon kí kḥabardári kartá hai. Cháhiye uskí bandagí karná aur uská hukm mánná.

ŪTĀRID KE BAYĀN MEN.

1. Jo saiyáre ko, Kḥudá ne sab saiyáron se áftáb ke karíbtar rakhá hai, wuh Markurí, yāne Ūtārid kahlátá hai: us ko dūrbín ke wasíle se har shaḥhs dekh saktá hai, aur kabhí baghair dūrbín ke bhí dekhá játá hai.

2. Yih saiyárah áftáb se tīn karor sattar lākḥ mailz dūr hai.

3. Us ká quṭr tīn hazár do sau mailz lambá hai, aur sūraj ke áspās sattási dīn, taīs ghante men ek daure ko tamám kartá hai.

4. Us kí tez rawí bahut bhayānak hai, yāne ek lākḥ pānch hazár mailz ek ghante men tai kartá hai !

5. Zamín kí banisbat, Ūtārid áftáb ke bahut naz-dík hai; is wáste sūraj us ke báshindon ko, sāt guná banisbat zamín ke báshindon kí, bará nazar áwegá, basharteki, unkí basárat hamárá basárat ke barábar howe:—aur garmí Ūtārid par, agar wuh makán zamín kí misál howe, sāt guní ziyádah howegí.

6. Mercury, like all the planets, has no light of his own, but shines with borrowed light from the sun.

7. A cannon ball would take 7 years and a half to reach Mercury from the sun.

“ First Mercury, amidst full tides of light,
Rolls near the sun through his small circle bright :
All that dwell here must be refined and pure,
Bodies like ours such ardour can't endure.”

VENUS.

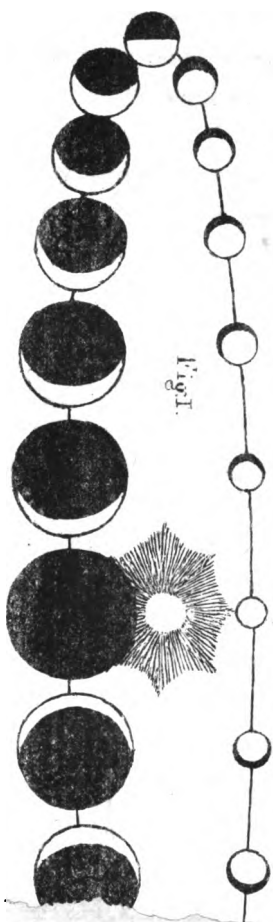
1. The second planet in the Solar System is 69 millions of miles from the sun, and is named Venus : she travels at the rate of 76 thousand miles every hour.

2. Venus wheels round the sun in 224 days, 17 hours, and her diameter is 7,706 miles. Venus is larger than Mercury, but smaller than this earth.

3. She sometimes appears the morning, sometimes the evening star. She is very beautiful and brilliant, and appears the brightest of all the planets.

“ Then Venus next, fair lovely star,
Fulfil her larger round,
With softer beams and milder glory crowned :
Friend of mankind, she glitters from afar,
Now the bright Evening, now the Morning star.”

*The various appearances of Venus as she revolves
Shaklan Yuhrah ki Aftab ke gird ghumne me*



The increase and decrease of the enlightened portion of a

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6. Utarid, sab saiyaron kí mánind, apní zát kí roshní kuchh nahín rakhtá hai, magar áftáb se mustanír hoke wuh chamaktá hai.

7. Agar áftáb par se top chhoṛí jáwe, to uská golah Utarid talak sáṛhe sát baras men pahunchegá !

ZUHRAH KE BAYAN MEN.

1. Yih saiyarah, jo qá'idah shamsí men dúsrá darjah wálí hai, áftáb se chha karor, navve lákh mailz dúr hai, aur Venas yáne Zuhrah kahlátí hai, wuh chhahattar hazár mailz ko ek ghante men tai kartí hai !

2. Venas, yáne Zuhrah, gird sūraj ke, do sau chaubís dīn aur sattraḥ ghante men, daur púrā kartí hai ; aur uská qutr, sāt hazár, sāt saú, aur chha mailz daráz hai. Zuhrah Utarid se barí, magar is kurah zamín se chhoṛí hai.

3. Wuh kabhí fajar ko nikaltí hai, aur kabhí shám ko. Wuh bahut khubsurat aur chamakdár, aur dekhne men sab saiyaron se us ko ziyádah chamak hai.

THE EARTH.

1. The third body from the sun is this Earth. Her distance from him is 95 millions of miles, and her time of revolution round him is 365 days 6 hours. Her diameter is nearly 8,000 miles.

2. Though we feel as if we were all at rest, God has made this earth, with us upon it, to travel at the fearful rate of 58 thousand miles every hour !

3. How should it make us stand in awe of the Almighty and worship Him when we consider, that he has made us, with this earth which we inhabit, to fly continually through the air 120 times faster than a cannon shot !

4. And how strange is it that man should neglect to worship and obey this awful Being, who has such dreadful power !

5. Surely those who fall down and worship stocks, and stones, and rivers, have never considered how they insult the Almighty who made all these worlds.

6. Surely no man who has studied astronomy could fall down to a stone and say, Thou art God !

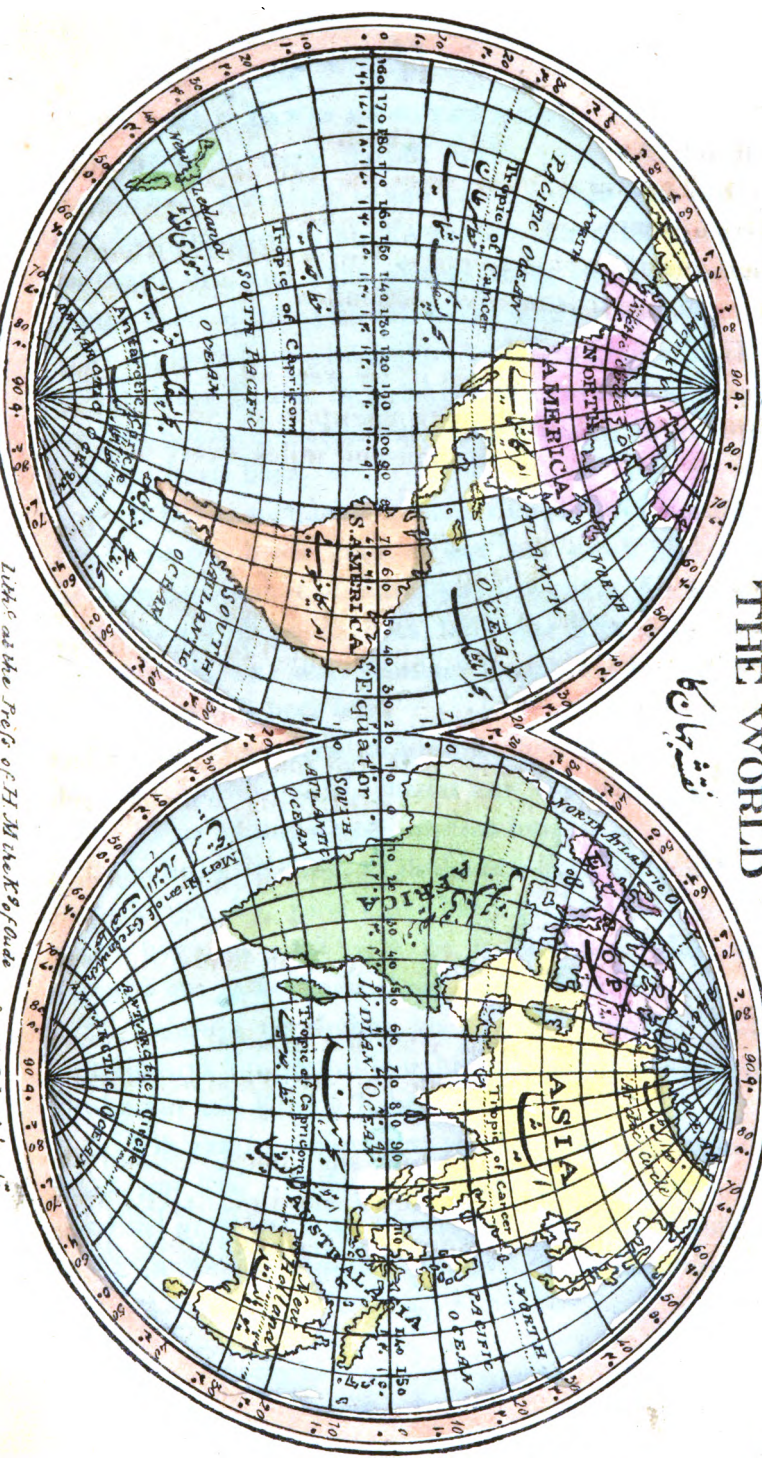
7. This our earth, like the moon and all the planets, is round. It turns round on its axis every day, thus daily exposing nearly all its surface to the sun.

نقشه شمالی

نقشه شمالی

THE WORLD

نقشه جهان



نقشه جنوبی

نقشه جنوبی

With a table of the Poles of H. M. K. of G. A. D.

ZAMÍN KE BAYÁN MEN.

1. Áftáb se tísrá darjah wálá jirm yihí kurah Zamín hai. Yih áftáb se nau karor, pachás lákh mailz dūr hai, aur gird áftáb ke gardish kartí hai tīn sau painsath din, aur chha ghañṭe men, yāne ek baras men. Uská qutr qarīb áṭh hazár mailz daráz hai.

2. Agarchih ham ko málúm hotá hai, ki zamín sák-in hai, lekin Kḥudá ne aisá kiyá, ki yih zamín sáth ap-ne báshindon ke, atṭhāwan hazár mailz, ek ghañṭe men tai kartí hai !

3. Is bát ke sochne se, ki ham *is waqt* ! sáth is zamín ke, ki jis par baste hain, ek sau bīs guná jald top ke gole ke harakat se, hawá par uṛe chale játe hain ! kyá kyá tájjub paidá hotá hai ! aur Kḥudá se, haibat rakhná, aur uskí bandagí karná, kis kis qadar, ham par wájib hotá hai !

4. Balki kyá kyá achambhá hai, ki insán aise muhīb wájibulojūd kí, ibádat aur tábedári se gháfil rahe, ki jis kí itní ḍaroní qudrat hai !

5. Tahqíq ! we log, ki jhukkar múrat, aur patthar, aur dariyá ko, pujá karte hain, unke dil men na guzrá hogá, ki jis Kḥudá ne, is tamám gardún ko banáyá hai us ko kaisá kaisá tanz karte hain !

6. Tahqíq ! us shaḥs ko, ki jisne ilmi haiat ká mutála kiyá hai, mumkin nahín ki patthar ke sámhne jhuke aur use Kḥudá kahe !

7. Yih zamín, chánd aur tamám saiyáron kí mánind, gol hai. Wuh apne mihūr par roz baroz ek gardish purí kartí hai ; pas har roz qarīb tamám satah zamín kí, ghumte ghumte, áftáb ke muqábil hotí hai.

8. Its turning motion on its axis is very swift. We are whirling round at the rate of 1000 miles an hour.

9. The earth's motions may be compared to the motions of a shell thrown from a large bomb or mortar, one motion straight through the sky, the other whirling on its own axis in the sky.

10. How swift is this two-fold motion of the shell ! But, O ! how incomparably more swift is the motion of this earth, as hurled into space by the fiat of the Almighty !

11. "The fear of the Lord is the beginning of wisdom." Men who live without God in the world, which he has made, are worse than the beasts that perish.

12. This earth is round : it has been sailed round by navigators.

13. It is peopled, as we know, by ourselves a fallen race of men, who though we acknowledge the right of the Almighty to our obedience, yet neglect his law.

14. After death will come judgment, when we shall stand before the judgment-seat of God to answer for our sins.

The Moon.

1. Because of the daily revolving motion of our globe, one half of its surface is deprived of the sun's rays ; the Creator has therefore appointed a moon

8. Zamín kí harakat apne mihúr par, is qadar jald hai, ki hazár mailz ek ghanṭe men ghúmtí hai !

9. Zamín kí harakat ko ghubáre ke gole kí harakat ke sáth tashbíh ho saktí hai ; hawá par sámhne nikal jáne kí, us kí ek harakat, aur apní mihúr par luṭhakne kí dúsre harakat.

10. Ghubáre ke gole kí yih daurangí harakat kyá aḡab tez hai ! Lekin aḡibtar hai, ki yih zamín, ki us ko Ḳhudáne ek *kun* ke kabne se sunsán par chaláyá hai, uskí harakat banisbat golí kí, kyá kyá bebayán hai!

11. “ Ḳhudá ká ḡar, aḡl kí buniyád hai.” Jo insán ki Ḳhudá ko bhúlke is duniyá men, jise Ḳhudá ne banáyá hai, guzrán karte haiṇ, we haiwán se, ki hashar se mahrum haiṇ, badtar haiṇ.

12. Yih zamín gol hai : ahli jaházon ne uske gird sair kí hai.

13. Yih zamín, jaisá ki málúm hai, ham ek ḡhil-qati ruswá se ábádán hai. Harchand ki hám iqrár karte haiṇ, ki Ḳhudá kí itáat ham par wájib hai, lekin uske hukm se ḡhaḡil rahte haiṇ.

14. Maut ke bád, roz mahshar hogá ; us waqt ham sab apne apne gunáhon kí jawáb dihi ke wáste. Ḳhudá ke mahkame men khare howenge.

Chánd ke Bayán men.

1. Yih zamín jis par ham baste haiṇ, áftáb, yáne, masdari roshní se, is qadar dúr hai, ki Ḳhudá ne hamáre wáste, ek chánd maqarrar kiyá hai, roshní

to attend us on our course, and to give us her reflected light during the night.

2. The moon too, though she looks so small, is a vast world, being 2,180 miles in diameter.

3. Though much nearer to us than any of the planets, she is yet a vast distance off, being 240 thousand miles from our earth.

4. The almighty and invisible God has fixed her course, and makes her travel round this earth once in 29 days and 12 hours.

5. The moon seems to move slowly, but is actually flying through space at the fearful rate of 3,290 miles every hour !

6. God has given her no light of her own, she shines by borrowed light from the sun.

7. The figures which we see in the moon are hills and valleys, lights and shades.

8. We conclude that she is inhabited, and that God has placed his worshippers there as well as here.

9. Our earth is a moon to the moon, and being much larger gives her 13 times more light than she gives to us.

10. When the moon is new, our earth is to her what the moon when full is to us. Her whole disk is strongly illuminated and distinctly visible to us.

pahuncháne ko jis waqt kirmín sūraj kí ghāib ho jāti hai.

2. Chánd bhí, agarchih dekhne men niháyat chhotá hai, lekin wuh ek bará jirm hai; uská qutr do hazár, ek sau ássí mailz lambá hai.

3. Wuh sab saiyáron se hamáre bahut nazdík hai. Tispar bhí chánd barí dūr hai zamín se, yāne do lākh chálís hazár mailz.

4. Haqtálá ne uská rástah muqarrar kiyá, aur uská daurah gird is zamín ke untís din aur bárah ghante men purá karátá hai.

5. Chánd zāhir men áhiste chaltá hai, magar haqíqat men wuh har ghante men sun par do hazár, do sai, nawwe mailz urá chalá jātá hai, aur yih barakat dahshat angez hai!

6. Kḥudá ne us ko kuchh zát kí roshnī nahín dí hai, wuh áftáb se roshan hai.

7. Wuhí sūraten jo chánd par nazar áti hai, pahár aur maidán hai, aur zarí roshnī, aur sáyah.

8. Qiyás men átá hai, kí chánd ábádán hai, aur yih kí Kḥudá ne us men bhí apne bandon ko sákin kiyá, jis tarah kí zamín men.

9. Zamín chánd ke haq men ek chánd hai; balki chánd ko terah gun roshnī pahunchátí hai, ba nisbat us roshnī ke, kí chánd zamín ko pahunchátá hai, is sabab se kí zamín chánd se barí hai.

10. Hilál ko zamín wuhí sūrat dekhátí hai, jo kí badar zamín ko. Chánd ká sárá maṇḍal bahut munawwar hotá hai, aur ham ko sáf sáf nazar átá hai.

11. The ignorant look upon the moon with a vacant mind, but the intelligent man contemplates that luminary and the stars, and the wheeling planets, with awe, as proofs of the stupendous power of the unseen Deity who guides them all.

12. The man who daily worships his Creator, looks up with holy fear and reverence, and says, "My Father made them all."

MARS.

1. In the solar system we have seen how the Deity has placed the sun as a centre; then appointed, first, Mercury, then Venus, then this earth to revolve around him.

2. The next planet in order is Mars, he is only one-fifth as big as our earth, and may be known by his red appearance: his distance from the sun is computed at no less than 144 millions of miles.

3. At this distance, the sun can appear only half as large as he appears to us.

4. The Deity has appointed him to travel at the surprising rate of 55 thousand miles every hour! He finishes his course round the sun in about 687 days.

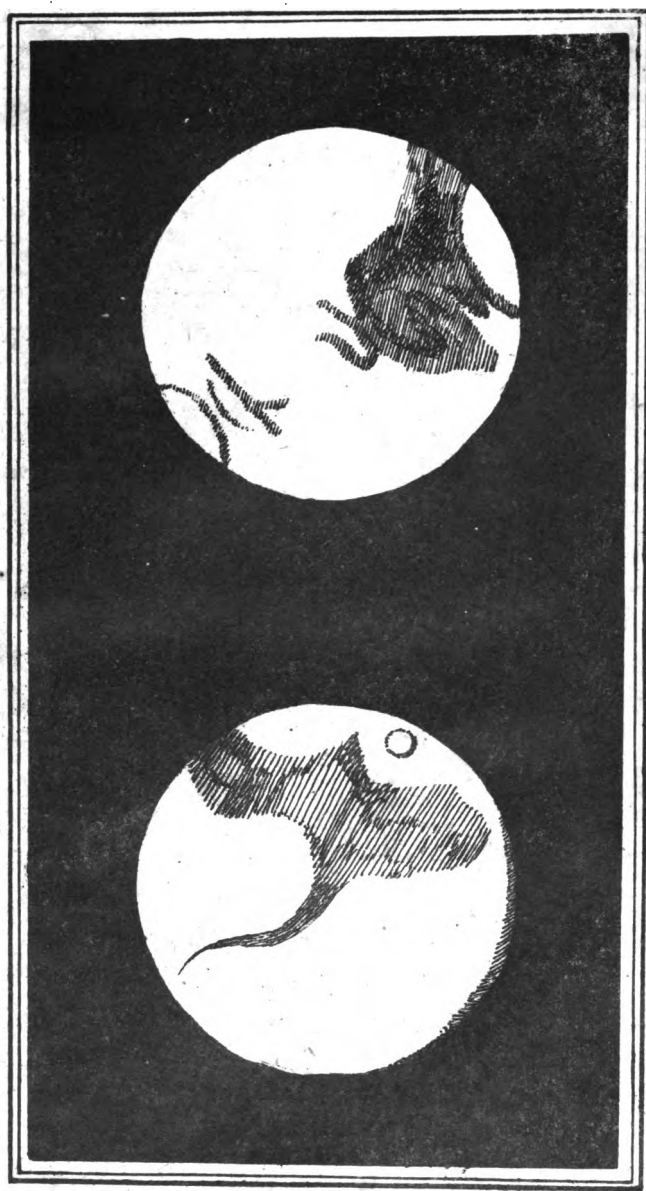
5. Mars too is a vast world, having a diameter of 4200 miles!

6. To Mars our earth and moon appear like two moons changing place with each other, and near

هرشل

sizes of *of H^c M. the King of Oude.*

بت ایک



Two Views of Mars.

دو نقشه مریخ

11. Nádán log chánd ko be chete se dekhte hain, lekin dáná ádmí us ko, aur ghumte hue saiyáron ko, aur sitáron ko, us gháib, yáne K̲hudá ke, jo in sabhon kī rāhnumáí kartá hai, barí qudrat kī dalíl samajhkar dar se dekhtá hai.

12. Jo ádmí, ki har roz apne k̲hálíq ko pújta hai, wuh K̲hudá ke dar aur ibrat se nazar útháe boltá hai, kī “In sabhon ko mere Báp ne banáyá hai.”

MIRRÍKH KE BAYÁN MEN.

1. Qá'idah shamsí se málúm huá, ki K̲hudá ne kyunkar áftáb ko darmiyán rakhá, aur pahle Utárid, pher Zuhrah, pher is zamín ko, uske gird, ghúmáe wále muqarrar kiyá.

2. Chauṭhe darje wálá Mirríkh saiyárah hai: zamín ke ba nisbat uská dal, faqat páncḥwán hissah hai. Aur wuh apní lál súrát se pahcháná játá hai. Hisáb kiyá gayá, ki wuh áftáb se dur hai, chaudah karor, chálís lákh mailz, is se kam nahín hai.

3. Itná jo dur hai, Mirríkh áftáb se, Mirríkh ko apná ádhá dal dekháí detá hai áftáb, ba nisbat dekháí dene uskí zamín ko.

4. K̲hudá ne Mirríkh ko ek mutájjib tez rawí dí hai, yáne sáre ghanṭá pachpan hazár mailz kī. Yih gird áftáb ke chhah saí, sattásí din men apne daure ko tamám kartá hai.

5. Mirríkh bhí ek tará jirm hai, uská qutr char hazár, do sau mailz daráz hai.

6. Mirríkh ko, yih zamín aur chánd do chánd ke muwáfiq nazar áte hain, nazdík nazdík, aur makán

together. Our earth appears almost as big to Mars as Venus to us.

7. Thus, if to the inhabitants of Mars and Venus our earth appears a mere star, we ought to bear in mind that those planets, though to our eye so small, are vast worlds.



THE ASTEROIDS.

Ceres.

1. Ceres is a small body, much less than any of the planets; it is farther from the sun than Mars: its diameter is only 165 miles.

2. She is distant from the sun 263 millions of miles. A cannon ball would be 61 years in travelling from the sun to Ceres. She travels round the sun in 4 years and 221 days.



Pallas.

1. Pallas is another asteroid, very small, its diameter being only 30 miles.

2. It is distant from the sun 265 millions of miles: it would take a cannon ball 62 years to reach it from the sun. It travels round the sun in 4 years and 7 months.

badlá badlí karte hain, Mirríkh kí nazar men. Jitne dal ká Zuhrah zamín ko nazar áti hai, qaríb itne dal ke zamín Mirríkh ko nazar áti hai.

7. Pas, agarchih Mirríkh aur Zuhrah ke báshindon ko, yih zamín sirf ek sitára sí nazar áti hai ; is bát ko samjhá cháhiye ki we saiyáre bhí, agarchih dekhne men bahut chhoṭe hain, filhaqíqat bare ijram hain.



CHHOṬE SAIYARON KE BAYÁN MEN.

Síríz ke bayán men.

1. Síríz ek chhoṭá jirm hai, sab saiyáron se bahut chhoṭá ; wuh áftáb se ba nisbat Mirríkh kí ziyádah dúr hai. Us ká qutr faqat ek sau painsaṭh mailz daráz hai.

2. Wuh áftáb se dúr hai chhabbís karor tirsath lákh mailz. Agar áftáb par se top chhoṛí jáegí, to us ká golah eksaṭh baras men Síríz tak pahunchegá ! Wuh apne daure ko gird áftáb ke tamám kartá hai chár baras, do sai, ekkís din men.



Pállas ke bayán men.

1. Pállas ek aur bahut chhoṭá saiyarah hai. Uská qutr faqat tís mailz lambá hai.

2. Yih áftáb se dúr hai chhabbís karor, painsaṭh lákh mailz. Agar súraj par se top chhoṛí jáwe, to uská golah Pállas talak básaṭh baras men pahunchegá. Gird áftáb ke wuh apne daure ko tamám kartá hai chár baras, sât mahíne men.

3. Some suppose that these asteroids, Ceres, Pallas, Juno, and Vesta, are fragments of a planet which God may have broken up and destroyed.

Juno.

Juno is an asteroid, very small: its diameter has never been measured. It revolves round the sun in 4 years and 128 days.

Vesta.

Vesta is an asteroid, but so small that its diameter has not been ascertained. She moves in her orbit between Juno and Jupiter, and takes 3 years, 66 days and 4 hours in her journey round the sun.

JUPITER.

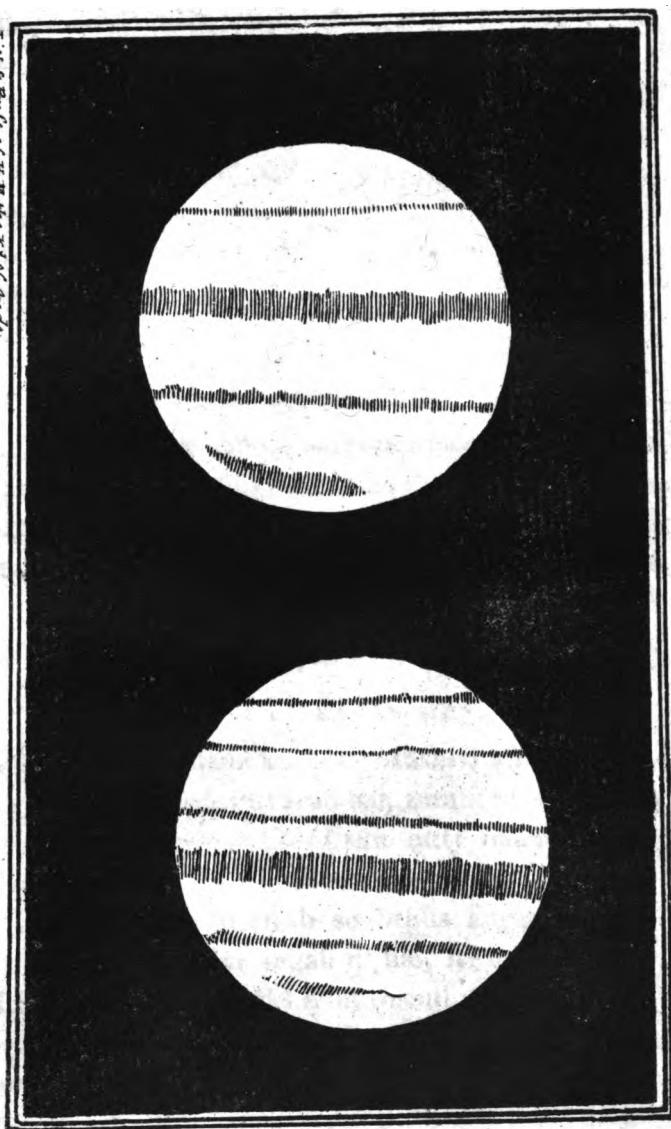
1. Next beyond Mars comes Jupiter, a vast planet about 1000 times bigger than the earth, his diameter being 89000 miles.

2. God has appointed his place, 490 millions of miles from the sun; but the wisdom of the Creator has supplied this want of light, by giving him four attendant moons to revolve about him, and light his sky.

Like *Fig's of H. M. the 1st of June.*

Two Views of Jupiter:

دو نقشه مشتری



3. Bāze ādmī khiyāl karte hai, ki Síríz, Pállas, Juno, aur Vestá, chāro saiyāre ek saiyāre ke tukre hai, ki jis saiyāre ko Allah ne tor dālā hai.

Juno ke bayān men.

1. Juno ek nihāyat chhoṭā saiyārah hai : uske qutr kī darāzī dariyāft nahīn hai. Wuh apne daur ko gird āftāb ke chār baras, aur ek sau aṭṭhāís din men tamām kartā hai.

Vestá ke bayān men.

1. Vestá ek aisā chhoṭā saiyārah hai, ki uske qutr kī darāzī dariyāft nahīn hai ; uskā daur bīch Juno, aur Mushtrī ke daur ke hai. Aur wuh apne safar ko gird āftāb ke tīn baras, chhasaṭh din, aur chār ghante men tamām kartā hai.

MUSHTRĒ KE BAYĀN MEN.

1. Merrīkh ke daur ke bād Mushtrī kā daur hai. Yih ek nihāyat barā saiyārah hai, zamīn ke saiyāre se *hazār gunne se ziyādah!* Uskā qutr nauāsī hazār mailz darāz hai.

2. Khudā ne usko āftāb se beālīs kaṛṛ sāt lāk mailz ke mufāsale par jagah dī hai, lekin phir usne apnī kāmīl tajwīz se, uskī kam roshnī purī karne ko, uske hamrāh *chār chānd* kar diē ! tākih we gird uske ghumā karen, aur uske āsmān ko roshan rakhen !

3. He travels in his distant course with the awful swiftness of 29,000 miles every hour.

“Four shining moons with borrowed lustre rise.
Bestow their beams by night, and light his skies :”

4. His four moons are some bigger and some smaller than this earth. His first, or nearest moon is 229000 miles distant from him, and goes round him in one day and 18 hours.

5. The Deity has so arranged his moons, that his skies are almost always lighted up by one or other.

6. He is the largest of the planets, and travels in kingly state.

7. Vain man is apt to think that this little planet of ours occupies all the Creator's care.

8. Let him reflect that an observer in Jupiter, if looking towards this earth, would not even see our little ball ; neither Mars, Venus, nor Mercury ! so near would they be to the sun, as to be lost in his light.

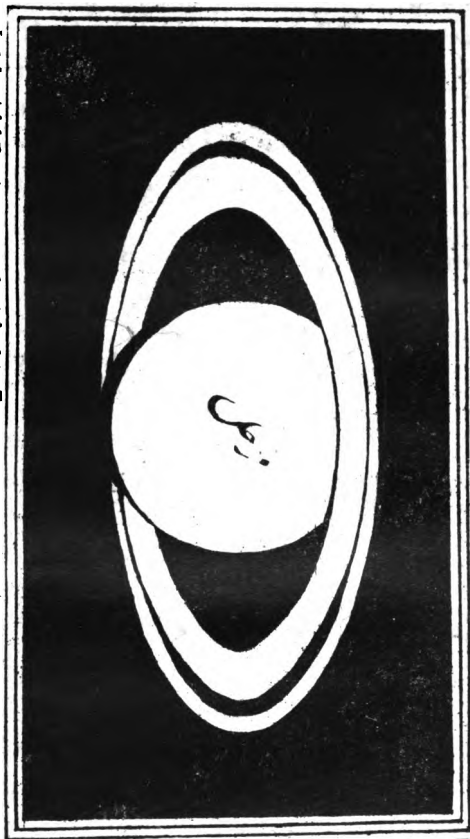
SATURN.

1. The planet Saturn is no less than 600 times larger than our earth, his diameter being 79,000 miles.

2. He is far removed from the sun, or 9000 millions of miles, yet he is warmed and lighted by its rays. A cannon ball would take about 215 years in flying from one to the other.

3. He travels round the sun at the rate of 22,000 miles every hour, though he seems to us to go very slowly.

of the Light: Part of H. M. the Kt of Oude
Sabura.





3. Wuh apne daur par, safar men, ek bhayának tezi se chaltá hai, yáne untís hazár mailz ek ghanṭe men !

4. Uske chár chándon men, is zamín se koí bará, aur koí chhoṭá hai. Uská pahlá chánd, yáne nazdík wálá chánd, Mushtrí se dúr hai, do karor untís hazár mailz ; aur gird uske ek roz aur atthará ghanṭe men apne daure ko tamám kartá hai.

5. Alláh ne uske chándon ko aisí tartíb kí hai, ki uská ásmán, kisí na kisí chánd se, aksar munauwar rahtá hai.

6. Mushtrí sab saiyáron se bará hai, aur wuh sháhánah shaukat se ghúmtá rahtá hai !

7. Khud pasand insán is khiyál men phansá hai, ki Khudá sirf hamáre chhoṭe saiyáre kí fikr men masruf hai !

8. Wuh insán dil men apne samjhe, ki Mushtrí par ká rahne wálá, agar is zamín ki taraf nazar karegá, to hamáre is chhoṭe gend ko dekhne bhí na páwegá ; na Mirríkh ko, na Zuhrah, na Utárid ko. Yih sab saiyáre, basabab nazdíkí áftáb kí, uskí roshní kí jot men, us deknewále kí ánkh men se gum rabenge.

ZUHAL KE BAYÁN MEN.

1. Zuhál ká saiyárah zamín se chhah sai guná bará dal men hai. Uská qutr unásí hazár mailz daraz hai.

2. Wuh áftáb se bahut dur hai, yáne nave karor mailz ; tispar áftáb kí kirnen usko garmí aur roshní pahunchátí hain. Agar áftáb par se top chhoṛí jáwe, to uská golá do sau pandrah baras men Zuhál talak pahunchegá !

3. Agarchih wuh hamáre dekhne men bahut áhístah chaltá hai, lekin Súraj ke áspás ek ghanṭe men, báís hazár mailz ke hisáb se ghúmtá hai !

4. Whilst we, in our shorter course, take only one year to travel round the sun, Saturn takes nearly 30 years in performing his annual revolution.

5. Observe the wisdom of God in providing for the wants of this far distant and enormous planet, by giving him, to light him in his course, a princely train of seven moons.

6. The inhabitants of Saturn, we may suppose, often see several moons in his skies at the same time.

7. To increase his light there has also been given to this planet, a vast shining ring ; within this ring " of worlds, such as ours, a thousand might be lost."

8. This ring, or belt, is 27 thousand miles in breadth, and may be distinctly seen through a telescope.

9. The inhabitants of Saturn, if they have no better eyes than ours, on looking towards us could not even see this little ball—our earth : to them, even with a telescope, it would be a mere speck.

Uranus, Herschel, or the Georgium Sidus.

1. Uranus is the farthest and most remote planet in the solar system.

2. He is scarcely visible to the naked eye ; and the natives of India are not aware that such a world exists.

4. Zamín apne chhoṭe daure ko, gird áftáb ke, tamám kartí hai sirf ek baras men; aur Zuhál kí gardish áftáb ke, qaríb, tís baras ke ársé men tamám hotí hai.

5. Is baṛe daur aur baṛe dal wále saiyáre kí háját barláne ko dekho, Alláh ne kaisí kḥub tajwíz ṭhahráí, ki usne sát chándon kí ek sháhánah hashmat is saiyáre ko dí, uská rástá roshan rakhne ko.

6. Yih qiyás ho saktá hai, ki Zuhál ke rahne wále uske ásmán men kaí ek chánd ekbárgí aksar dekhne páte hai.

7. Is saiyáre kí roshní ziyádah karne ko, ek baṛá sá chamakdár halqah bhí usko diyá gayá hai, jis halqah ke andar agar hazáron is zamín kí mánind duniyá gum ho jáwen, to kuchh tájjub nahín hai.

8. Yih halqah satáís hazár mailz chauṛá hai, aur durbín se sáf dekhá játá hai.

9. Zuhál ke rahne wále, is shart se, ki un kí basárat hamárá basárat se ziyádah na ho, to is chhoṭe gend, yáne zamín ko, hargiz na dekhenge! unkí nazar men agar durbín se bhí dekhenge, to ek nuqtah se sirf dekhlaí degí!

URÁNAS, YÁNE GEORGIUM SAIDAS KE BAYÁN MEN.

1. Qáḍdah shainsí men Uránas dūr tarín saiyárah hai.

2. Be durbín ke, wuh kam nazar átá hai, aur ahl Hindustán is saiyáre ke wujud se wáqif nahín.

3. He is 1,82,24,00,000 of miles distant from the sun, and it would take 431 years for a cannon shot to fly from one to the other.

4. He performs his journey round the sun in 87 years, moving at the rate of 7,000 miles an hour.

5. The Deity has given to Uranus six moons, to move round him and light him on his course. His diameter is 35,112 miles ; and with our eyes, our little planet earth could not be seen from thence.

6. The poet says :

Far West and East, scarce warm'd by Phœbus' ray,
Through his large orb Uranus wheels away.
How great the change ! could we be wafted there ;
How slow the seasons, and how long the year.
Strange and amazing must the difference be,
'Twixt this vast planet and swift Mercury !
Yet Reason says, nor can we doubt at all,
Millions of beings dwell on either ball,
With constitutions fitted for that spot
Where Providence all-wise has fix'd their lot.

Comets.

1. Comets also form a part of the solar system : all the planets above enumerated move in one direction round the sun, but comets rush in through the system from every quarter of the heavens.

3. Wuh áftáb se dūr hai, ek sau beásí karor, aur chaubís lách mailz. Agar us par se top chhoṛí jáe, to áftáb tak uská golá chár sau ektís baras men pahunchegá !

4. Wuh ek ghanṭe men sāt hazár mailz tai kartá húá, aur gird áftáb ke apne daure ko tamám kartá hai satásí baras men.

5. Alláh ne, Uránas ko, chhah chánd die hain, us ke áspás daurah karne ko, aur us ká rastáh roshan rakhne ko. Us ká qutr paintís hazár, ek sau bárah mailz lambá hai, aur hamári aisi áñkh se, us par ke rahne wale ko zamín ká chhoṭá saiyaráh nazar nahín áne ká.

ZU AZNABON, YÁNE DUMDARON KE BAYÁN MEN.

1. Zu aznábe bhí qá'idah shamsí men dákhil hain. Sab saiyáre, jo ki upar bayán kie gae, ekru ho-kar, gird áftáb ke gardish karte hain; magar zu aznábe kajrau, aur biki chál hain. Ye aflák kí har taraf se saiyáron ke daure ke darmiyán, ek ek jhapattá phirtá hai.

2. Their velocity is inconceivable: they rush down toward the sun, wheel round him, and speed back again their wild excentric way, until far beyond the ken of human eye.

3. The appearance of comets is remarkable: they have a long luminous tail, and travel with fearful speed, leaving all the planets far behind.

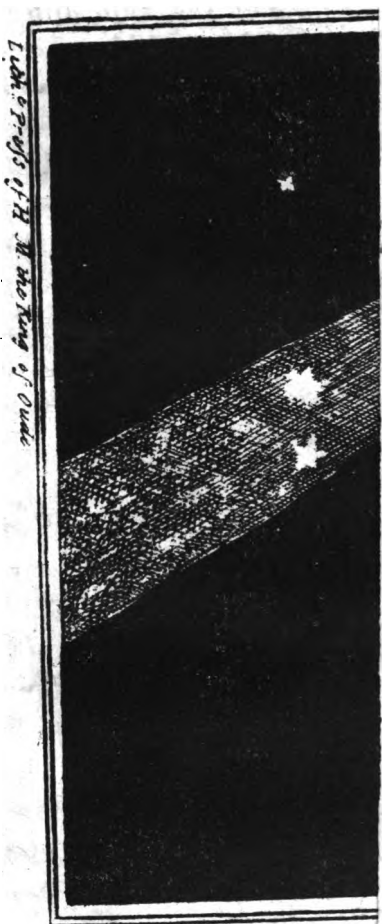
4. The train, or tail of that comet which appeared in 1807, was nine millions of miles in length.

5. And the rate of travelling of the comet which appeared in 1680, was 8,80,000 miles an hour! Think of the awful power of the Almighty, to hurl a flaming comet into space with the fearful velocity of eight hundred and eighty thousand miles in every hour!

6. The comet in 1680 rushed down towards the sun with such awful speed, that one would suppose nothing could arrest his terrific course, and that he would rush past the sun into the space beyond.

7. But, no! obedient to the fiat of our Creator, he wheeled close round the sun within the orbit of Mercury, and at a distance from the sun of half the sun's diameter, then rushed forth again far beyond the utmost limit of our solar system. He was in sight four months.

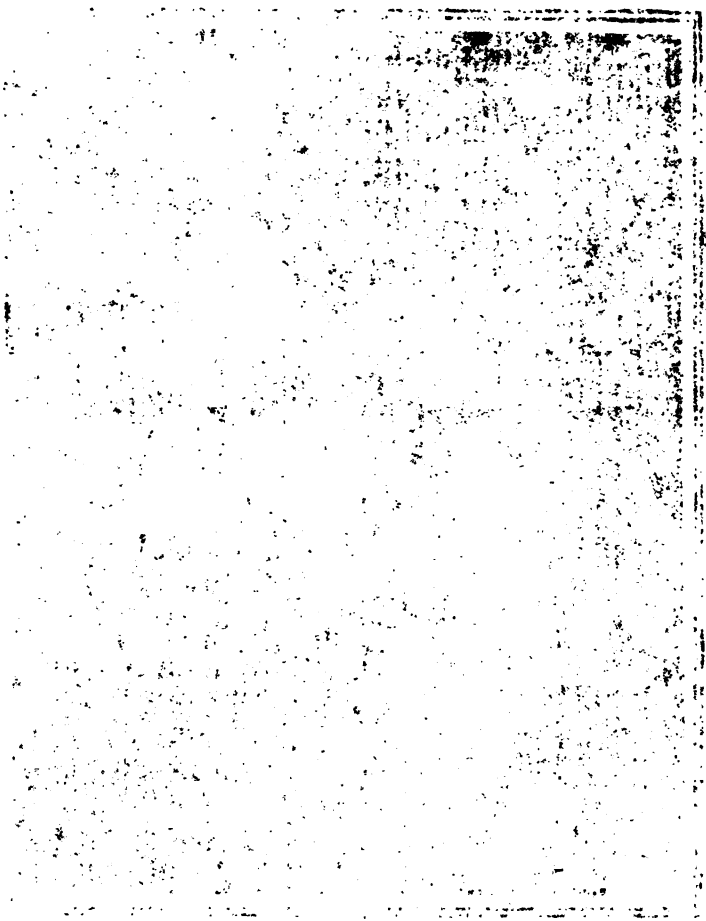
8. It is said that, in A. D. 1454, a comet came so near the earth, as to be between the moon and us, and that the moon was eclipsed by it.



Light & Power of H. H. the King of Oude

The Comet of 1811.

دوزخ ۱۸۱۱ء



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2. Unkí tez rawí *ḵhiyál* se báhar hai : we áftáb kí taraf jhapatte áte, gird uske chakkar *kháte*, aur phir ulte, apne kajrau raste men *daurte* *daurte* insán kí nazar se bilkul *gháib* hojáte hain.

3. *Zu aznáb*on kí surat achambhí hai : ek lambí roshan dum rakhte hain, aur sab *saiyáron* ko bahut píchhe chhoṛke bhayának tezí se chalte hain.

4. Wuh *zu zamb* jo san 1807 *Ṣawí* men namud huá thá, uskí dum nawe lákh mailz lambí thí.

5. Wuh *zu zamb* jo san 1680 *Ṣawí* men namudár huá thá, wuh áṭh lákb, aur assí hazár mailz ek ghante chaltá hai ! *Alláh* kí pur haibat qudrat ko dekho ! jo wuh ek shuḡlah *zan zu zamb* ko is tezí se, sunsán par chalá saktá hai !

6. San 1680 *Ṣawí* ká *zu aznáb*ah áftáb kí taraf *daurá* áyá, is tezí se, ki *qiyás* hotá thá, ki koí chíz uske bhayának chalne ko rok nahin sakegí, aur wuh áftáb ko chhoṛkar *daur* ke sunsán men *dur* nikal jáwegá.

7. Lekin *Ḵhudá* ká hukm mánke, us *zu zamb* ne, *Utárid* ke *daure* ke bhítar se hokar, aur áftáb se áftáb ke ádhe qutr ke mufásale par, gird áftáb ke chakkar *kháyá* ! Phir *saiyáron* ke *daure* kí had se báhar *daurá* chalá gayá ! Wuh *chár* mahíne talak dekháí diyá.

8. Kabá hai, ki san 1454 *Ṣawí* men, ek *zu zamb* zamín ke aisá nazdik áyá, ki *chánd* aur zamín ke bíchon bích ho gayá ! aur *chánd* ko, nazar se chhipáyá.

9. The Comet of 1770 came so near our world, as to have its motion affected by the attraction of the earth.

10. Think of the fearful consequence ! had that comet made a rush at this our earth, we must all have probably perished by the shock !

11. The same comet sped its fearful way, and passed through amongst the moons or satellites of Jupiter.

12. Had any of those moons or worlds, themselves moving with dreadful speed, met or been struck by the rushing comet, one or both must have perished : but God's eye is over all his works, and He who watches over us on earth, with a Father's care, guides the comet's path free of all other worlds.

13. Sir Isaac Newton computed the heat of the comet of 1680, when it passed so near the sun, to be 2000 times hotter than red hot iron.

14. Its computed time of performing its journey was 575 years ! It would thus rush out into space 13,000 millions of miles, and some think would turn round other suns.

15. How wonderful is the contemplation of our Creator's power. Let us remember that he who hath affectionately said, " My son, give me thine heart : " " If ye obey me, I will be to you a Father, and ye shall be my sons and my daughters," is the same awful and mysterious Being who made and guides

9. Wuh *zú zanábah* jo san 1770 *Isáwí men* namú-dár thá, zamín ke aisá nazdík áyá, ki zamín ke jazbe ne uske chalne ko asar kiyá.

10. Agar wuh *zú zanábah* hamári is zamín par chaḡh atá, to bichár karo, ki hamáre wáste anjám kyá burá hotá! Uske sadme se, aḡhlab, ki ham sab mar játe!

11. Lekin wuh apne bhayának chalan se, Mush-tarí ke chándon ke bích men se nikal gayá.

12. Agar un chándon men se, ki we áp niháyat tez rau hain, kisí ko us dauṛte hue *zú zanábe* se ṭakkar lag játí, to ek yá dono tút játe. Lekin *Khudá* kí nazar apne sub masnuát par hai, aur wuh jo ahl zamín kí nigahbání kartá hai, Padarí shafqat se sab saiyáron aur sitáron ke farq se *zú zanábon* ko chalátá hai.

13. Jo *zú zanábah*, ki san 1680 *Isáwí men* záhir huá thá, Sar Aizák Nutan Sáhíb ne hisáb kiyá, ki jis waqt ki wuh Súraj ke nazdík se guzrá, uskí garmí, garm lohe se do hazár gunní ziyádah thí!

14. Hisáb kiyá gayá, ki us *zú zanábah* ne páñch sau, pachhattar baras men apne safar ko tamám kiyá thá. Pas wuh ek padam tén mahárbud mailz sunsán tak men dauṛá hogá. Aur báze ádmí samajhte hain, ki us ne aur bhí áftábon ke gird chakkar kháyá.

15. Hamáre *kháliq* kí qudrat kyá kyá achambhí hai! Ham yih bát yád rakhen, ki jis ne piyár se kahá, ki “Ai merá beṭá, tú mujh par dil lagá, Jo tum merá hukm mánoge, to main tumháre Báp ke taur par hungá, aur tum ko apná beṭá beṭí kar samjhun-gá;” wuh wuhí haibat-nák aur maḡhbí-zát hai, jo

ing comets, and who directs, in their appointed place,
the planets.

“ Lo ! from the dread immensity of space,
Returned with accelerated force,
The rushing comet to the sun descends,
And as he sinks below the shading earth,
With awful train projected o’er the heavens,
The guilty nations tremble !”



MOTION OF THE EARTH AND PLANETS ROUND THE SUN.

1. It was at first supposed, and even now is believed by many who have not had the opportunity of fully weighing the subject, that the sun and all the stars of heaven move round the earth once every day ! Whereas, the sun is stationary, and the earth moves round him. The apparent movement of the sun and stars is caused by the earth turning on its own axis every day. The proof is this : we know by plain observation that the planets Mercury, Venus, Mars, Jupiter, Saturn and Herschell, all move round the Sun. We see them nightly. We can trace their movements in the heavens, therefore we cannot doubt that they move round the sun as the centre of their motion. Now this earth, like them, is a planet, one of the attendants of the sun, like them receiving light and heat from that luminary. It is a thousand times less than Jupiter, and very much smaller

aise daurte zú zanábe ko banákar apní hukumat men rakhtá hai ! Aur har ek saiyáre ko jagah muaiyan par rakhkar, unki ráhnumái kartá hai !



SÚRAJ KE GIRD BAGIRD ZAMÍN AUR SAIYARON KE HARAKAT.

1. Age ke zamáne men log jánte the, aur balki ab bhí, bahut se log, jo bát kí tah ko nahín samajhte hain, itiqád rakhte hain, ki Súraaj aur báqí sitáre zamín ki gird din bhar men, ek bár phirte hain ! Hál-ánki, áftáb apní jagah par qáim hai, aur zamín us ke gird ghumtí hai. Aur zamín ke har roz apne markaz par ghúmne se, záhír men málúm hotá hai, ki Súraaj aur sitáre gird zamín ke ghúmte hain. Dalíl is par yih hai ; ki ham ko sáf málúm hotá hai, ki yih sab saiyáre, misl Útarid, aur Zuhrah, aur Mirríkh, aur Mushtarí, aur Zuhál, aur Uránas Súraaj ke gird ghúmte hain. Ham unhen rát ko dekhte hain ; aur ásmán men unki harakaton ke nishán batá sakte hain ; is liye shak nahín hai, ki we gird súraaj ke, ki un ká markaz hai, ghumte hain. Ab dekhá cháhiye, ki zamín bhí *unhon* kí tarah se Súraaj ke tábjí hai, aur unhon kí mánind, roshní aur garmí us se pátí hai. Zamín Mushtarí se bazár darjah chhoṭí hai ; aur Zuhál kí nisbat se bhí

than Saturn. Why then should this earth be an exception, and not move round the sun also ?

2. Again, this earth when compared with the sun is quite small, like a pea compared with a large earthen water-vessel or gburrah.

3. Now all the millions of stars in the heavens are also vast suns, so that our little earth becomes in the contemplation, like a grain of sand amidst the immensity of creation around ; how then can we suppose that the sun, and millions and millions of other suns and worlds in glorious profusion, which spangle the vault of heaven, should all pay obeisance and move daily round our little ball !

4. Suppose an ant were seated on a round earthen vessel which floated in the midst of a lake, and turned round with the breeze, the little ant would see all the trees, the elephants, the towns, and palaces, and forts, and hills, and sky *apparently moving round* ; this object coming in sight—and that going out of sight. Now would it not be most ignorant in the little ant to say, because the earthen vessel happened to move round, that all the objects on the shore, the palaces and mountains, and even the sky beyond, were spinning round the little earthen vessel ! So it is with us upon this earth. We ourselves, like the earthen pot, move round, and therefore all the heavens appear to us to move ! Impossible ! that the sun, and planets, and all the millions of suns which spangle the firmament on high, should every day actually be spinning round a little ball like this of our earth !

chhoṭī hai. Pas kis liye, zamín sab se nirálí ho, aur Súrāj ke gird na ghúme ?

2. Dúsré ; yih, ki zamín Suraj kí nisbat itní chhoṭī hai, jaisí ek maṭar, ghaṛe kí nisbat se ho.

3. Lákhon sitáre ásmán men Suraj kí mánind hain ; pas zamín un kí nisbat is be shumár kárkháne men, ek reg ke dáne ke misl málum hotí hai ! Ab ham kis tarah mánen, ki *Suraj* aur *gardon* men is kasrat ke sáth, ki tamám ásmán par chhamakte hain, sab tábi hon aur har roz gird ek chhoṭí sí golí, yāne zamín ke ghumen !

4. Farz karo, ki ek chyúntí ghaṛe par baiṭhí ho, aur wuh ghaṛá ek jhíl men rahe, aur hawá ke zor se ghumtá játá ho, to wuh chyuntí dekhegí, ki goyá tamám daraḳht, háthi, shahr, mahal, qíla, pahār, aur ásmán ghúmte hain ; ek chíz ánkhon ke sámhne áتی hai, aur dusrí gháib hojátí hai. Pas, yih nádání nahín hai, ki ghaṛe ke ghumne ke sabab, chyúntí samjhe, ki kináre kí sab chízen mahal, aur pahār, aur balki ásmán us ghaṛe ke gird ghúmte hain ? Yihí hál hamará hai is zamín par ; ki ham kḥud us ghaṛe ki tarah ghumte hain, aur us ke sabab sára ásmán, hamare gird ghumtá nazar áta hai. Muhál hai, ki hamará áftáb, aur saiyáre, aur karoron Suraj jo ásmán par chhamakte hain, har roz ke chhoṭí sí golí ke gird ghumen !

5. This ridiculous idea has long since been abandoned by European nations. It is not to be wondered at, however, that the Indian nation should still fancy the firmament to be *spinning round our heads!* for they have not had the advantages of European telescopes to measure the exact sizes of the sun and planets, and have as yet, but entered the threshold of the science of Astronomy. Ere long, the wise of this nation also, will join the philosophers of Europe, and explain to their Indian brethren the wonderful fact—that God, the great Invisible Spirit, who is every where present, minutely directing all Creation with awful power, and watchful care, has, with infinite wisdom and wonderful contrivance, made this Earth on which we dwell, to turn daily on its axis, and alternately receive *the light and heat of the Sun*. And, O beautiful provision of the Great Creator! when our wearied bodies require sleep and rest, we turn from the sun to be enveloped in the still and peaceful calm of *darkness and repose*. Thus all the wondrous works of God proclaim his praise. Let us exclaim with King David of old—“Praise the Lord, O my soul; and all that is within me praise His holy name!”

5. Wiláyat ke aqlmandon ne is k̄hiyál behudah ko muddat se chhoṛ diyá hai. Kuchh tájjub nahín hai, ki Hindustán kí qaum ab tak yihí jáne, ki ásmán hamáre siron ke gird phirkí kí tarah ghumtá hai! is liye ki unhen *Wiláyat kí dūrbín* nahín pahunchín, ki we baráí aur miqdár áftáb ke, aur sai-yáron ke thík málum karte; aur we log abhí tak Fan haiat kí ibtidáhi men hain, jar ko nahín pahunché hain. Thoṛe roz bád Hindustán ke dáná log Hukmáe Wiláyat ke sáth ittifáq karke apne Hindke, bháíon se is ajúbah ko bayán karenge, ki K̄hudá ne, jo har jagah házir aur názir hai, apne zor aur nigahbání se, zarrah zarrah bandobast apní Maḡhluqát ká karke, kamál aql aur ajáib íjádón se apní duniyá ko, jis par ham baste hain, banáyá; aur ajíb dánái se tajwíz kiyá, ki wuh har roz apne markaz par phirá kare, táki hame-shah garmí aur roshní áftáb se páwe. Wáh! kyá k̄húb fazl aur dánái *k̄hálíq* ke hai! jab ham thakkar sone, aur árám karne kí taraf máil hote hain, to ham *áftáb kí taraf se phir játe hain!* táki *táríkí* men árám se chup leṛ rahen. Ğharaz tamám ajáib maḡhluqát K̄hudá kí us kí hamd aur saná karte hain. Pas ham ko cháhiye, ki hazrat Bádsháh Dáud ke sáth ham bhí kahen, ki “*Hamd kar K̄hudá kí, ai mere dil! tamám jo mujh men hai, tárif kar us ke ism muqaddas kí!*”

THE WORLD IS PROVED TO BE ROUND BY THE MEETING OF SHIPS AT SEA, AND BY SHIPS SAILING COMPLETELY ROUND IT.

1. SOME of the ancient books of the Hindus erroneously say, that this earth on which we live is a plain or *flat surface*; but it has long since been fully and completely proved *to be round, and an enormous globe.*

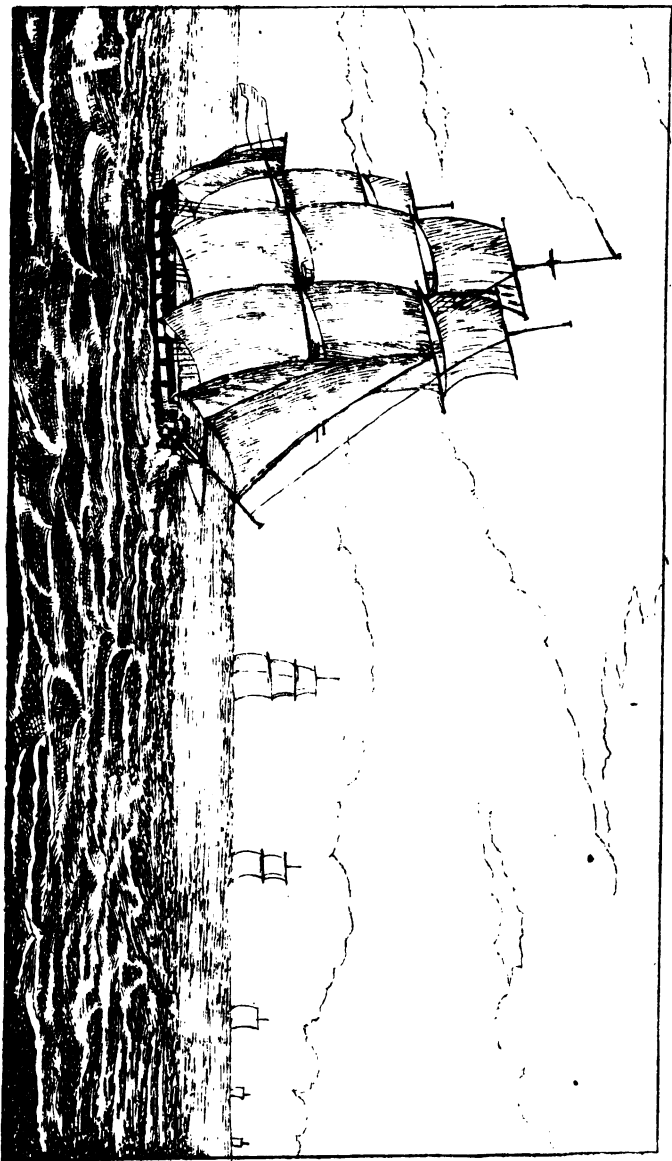
2. Those who have travelled in ships upon the vast ocean, and seen "the wonders of the great deep," need no other proof that the world is round: for when nothing but a far extended expanse of water is seen on all sides, if the world were a plain flat surface, a ship approaching from a distance would be seen by the spectator complete from its hulk to its top masts, thus:



3. But every one who has been out upon the ocean well knows, that because the earth is a round globe, the top mast only of a distant ship approaching is first seen,—

Ship's approaching at sea afford a beautiful proof that this Earth is round, because of the curve of the Waters, the top Sail only is seen at first but as the Ship gradually ascends a second and third Sail appears until at length the whole Ship is seen.

Printed at the Little Press of H. M. the King of Oude.



**SAMUNDAR MEN JAHÁZON KE APAS MEN MILNE SE,
AUR JAHÁZON KE BILKUL SAMUNDAR KE GIRD GHU'M
JANE SE, SÁBIT HOTA HAI, KI YIH DUNIYA GOLHE HAI.**

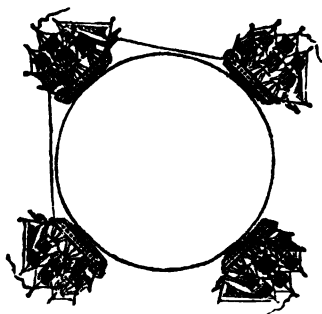
1. Hinduon ke baze qadím kitábon ká yih bayán hai, ki yih duniyá, jis par ham baste hain, musattah aur chiptí hai; lekin muddat se kamál tahqíq ho chukí, ki yih gol, aur niháyat azím goláí hai.

2. Jin logon ne samundar azím ká safar kiyá, aur ajáibát uskí dekhe hain, unko, is duniyá kí goláí sábit karne ke liye, kuchh hájat báqí nahín rahí : kyunki jad cháron taraf dúr aur daráz siwáe pání ke aur kuchh nazar nahín átá, pas agar yih zamín bará-bar musattah hotí, to jaház dúr se sarápá, yáne niche se aur mastúl tak, dekhne wálon ko bilkul nazar átá hai, yun :



3. Lekin har ek jis ne safar samundar par kiyá hai, baqhúbí jántá hai, ki yih duniyá gol hai, is sabab se, ki jad jaház dúr hai, tad sirf uská upar ká pál dekh partá hai :—

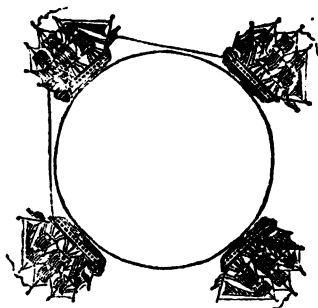
then gradually more and more of the sails appear in view, and long after the sails have been distinctly seen, the ship itself is concealed below the horizon. Is not this a proof that the earth is round?



4. Look at the picture! It is exactly so at sea. Observe the gradual approach of the same ship: at first, her top mast and upper sail alone appears; all the rest of the ship is hid by the curve of the ocean. All spectators are eager to know from what distant land she comes—from Europe?—from the new world, America?—from England? but all must wait until the approaching vessel has ascended a little further the curve of the earth's or ocean's surface.

5. Look at her again; *two* sails have now risen above the surface; the hulk, or body of the ship, is still out of sight. After an hour's advance, look once more! *three* sails are now distinctly seen: *still no hulk appears*. The fresh breeze pressing her onwards, upon the ocean's curve, at length brings all her hulk to view. This surely proves that the world is round.

tad darjah badarjah pál ziyádah nazar áte játe hain, aur ákhir der bád pál bilkul dekh parte hain; lekin jaház uṭhán pání men chhipá hai. Kyá yih goláí zamín ke liye dalíl nahín hai?



4. Taswír par nigáh karo ! Yihí hál ba jins samundar men hai. Us jaház ke raftah áne par dliyán karo ; pahle sirf us ká upar ká pál nazar átá hai, báqí bilkul jaház samundar ke uṭhán men chhipá hai. Sab dekhne-wále jánne ke musthtáq hain, ki áyá, wuh jaház kis dūr sar zamín se átá hai,—áyá Wil-áyat se? yá nayí duniyá, yāne Amariká se? yá Inglistán se? lekin sab ko cháhiye intizár karen, tábil us waqt tak, ki wuh jaház kuchh dūr samundar kí uchán par chaḥkar nazdík áwe.

5. Phir us jaház ko dekho ; do pál pání ke upar namudár hain, lekin hanoz jaház nazar se gḥáib hai. Ek ghanṭe ke bád phir agáí nazar karo ; ab tén pál sáf dekh parte hain, lekin jaház abtak nahín namudár huá hai. Tázah aur tez darjah ba darjah samundar kí uchán par chaláti hai ; áqlír bilkul jaház nazar átá hai. Pas beshuk sábit hai, ki yih duniyá golí hai.

6. Many ships have sailed *completely round the world*, and proved beyond a doubt that it is a globe.



ECLIPSES.

1. Many Hindus, who have not learned better, when they see an eclipse of the moon, turn out into the street, shout and clap their hands, thinking thus to scare away the evil spirit Ráhú ! who they suppose is devouring the moon !

2. But the better informed know that the eclipse is caused by this earth, which we inhabit, passing between the sun and the moon, and thus intercepting the sun's rays, and preventing any light from falling upon the moon.

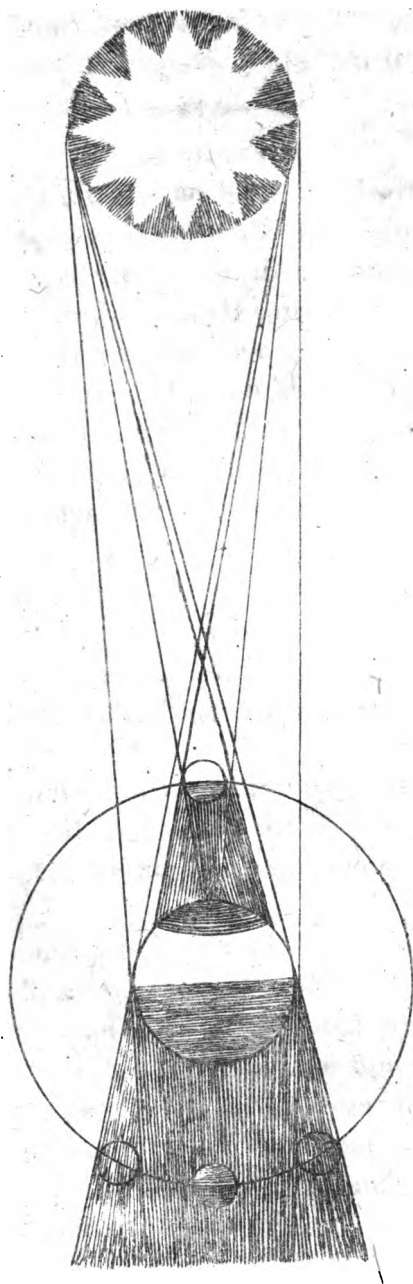
3. Thus in a dark night, if you place any thing between the lamp and any object, the object cannot be seen. In a partial eclipse of the moon, the shadow of this earth obscures a part of the moon.

4. The shadow is always circular, which is a proof that this world is round ; for if the earth were square, or flat, or angular, the shadow would be angular

5. Astronomers can calculate the exact moment at which eclipses will take place.

6. An eclipse of the sun is caused by the moon's passing between this earth and the sun.

7. For instance, the sun is hid from us when we hold our hand between our eyes and the sun : the moon's passing between the earth and the sun has just the same effect.



Solar and Lunar Eclipse

آفتاب اور ماہتاب کا گرہن

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6. Bahut jabázon ne duniyá ke bilkul gird safar kiyá : pas uski golái men kuchh shak nahín rahá.

GAHANON KE BAYAN MEN.

1. Bahut Hindu log, jo be tálím hain, jis waqt ke chánd ká *gahan* dekhte hain kúche men báhar nikal ke nárah máрте hain ! aur tálí bajáte, táki asur Ráhu ko bhagáen ! jo un kí samajh men chánd ko nigle játá hai !

2. Lekin we log, jo tálím páe hain, jánte hain, ki jab yih zamín, jis par ham baste hain, *darmiyán* súraur aur chánd ke ájátí hai, aur súraur ke kirnon ko, chánd tak pahunchne nahín detí, tab chánd ka *gahan* ho játá hai.

3. Chunánchih andhere men, ek battí aur kisi ek maujud chíz ke *darmiyán* koí aur chíz rakho, to wuh chíz maujud tumhen dekhái nahín degí. Ek juzví *gahan* ke waqt, zamín ká sáyah chánd ke báze jirm ko tárík kartá hai.

4. Yih sáyah hameshah gol hai, aur is zamín ke golái kí ek dalíl hai : kyúnkí, agar chaukhunṭí, yá musattah hotí, yá konedár to us ká sáyah waisá hotá.

5. Ahl i Haiat thík hisáb karke kah sakte hain, ki *gahan* kis dam hogá.

6. Áftáb ká *gahan*, *darmiyán* zamín aur áftáb ke chánd ká jirm ájáne se, hotá hai.

7. Maslan, jab koí apní áúkh ke sámhne háth rakhtá hai, to áftáb chhip játá hai : isí tarah se áftáb chhip játá hai chánd ke ájáne se bích zamín aur áftáb ke.

8. It is said, that on one occasion the moon so completely hid the sun from us, and made so completely an eclipse at noon-day, that total darkness prevailed to the terror of many, and that even the birds of the air fell to the earth from fear.

9. These eclipses shew us, what indeed we may learn every night, that this earth and the moon are of themselves dark and dreary, and derive all their light from the sun.



THE FIXED STARS.

1. We have seen that the earth which we inhabit, is only a small portion of God's workmanship, compared with the magnificence displayed in creating, arranging, and guiding the other worlds, in the solar system.

2. We have now to see that the solar system itself, with all its grandeur of revolving worlds, is but a trifling portion of the universe which God has made.

3. All the fixed stars which spangle the vault of heaven, are supposed to be each a sun; and like ours, the centre of a system of planets, or worlds, revolving round them.

4. "Herschel's discoveries with the telescope are truly astonishing: on fixing his telescope, in one quarter of an hour, through the field of view, no less than one hundred and sixteen thousand stars, or suns, passed."

scope.

نقشه هر ش

8. Kahá hai, ki kisí waqt men, chánd ne do pahar áftáb ko zamín wálon kí nazar se bilkul chhipáke, is qadar ká sarb gahan dekháyá, ki niháyat andhere se bahut logon ne khauif kháyá, aur chiriyán bhí hawá se zamín par, dar ke máre, gir gir parín.

9. In gahanon se málum hotá hai, jo din rát ká pher phár bhí ham ko jitátá hai, ki zamín aur chánd ká jirm asal men tárik aur be nur hai. Aur jo kuchh roshní un ko miltí hai, áftáb pahuncháta hai:



BAYAN MEN SAWABIT KE.

1. Jáná gayá hai, ki yih zamín, jis par ham basté hain, Alláh ke masnát men kam miqdár hai, az ruí jirm ke muqábil men is buzurgí ke, jo Alláh ne dekháí hai qá'idah shamshí men, aur saiyáron ke baná-ne, tartíb karne, aur ráh batláne men.

2. Ab yih jánná báqí hai, ki jitne saiyáre is áftáb ke eláqe men hain, sáth apne áftáb ke, báwajúd un kí buzurgíon ke, tud bhi halkí miqdár hain, gintí men sáre masnát gardún ke.

3. Sab sawábit, jo ásmán par chamakte hain, ek ko, logon ne áftáb khíyál kiyá hai; aur isí áftáb kí mánind, ek ek ko markaz ghumte saiyáron ká, jáná hai.

4. “Harshil sáhib ne ajíb tarah se sitáre durbin se nekále: yáne, jab durbín ko lagáyá, páo ghanṭe ke arse men, us kí nigáh ke sámhne, ek lákh solah hazár sitáre, yáne áftáb, guzar gae !”

5. " Shall we then say of these vast luminaries that they were created in vain? Were they called into existence for no other purpose than to throw a tide of useless splendour over the solitudes of immensity?"

6. " Our sun is only one of the luminaries of the Almighty's train. Why should we strip the rest of their princely attendance? Why may not each of them be the centre of his own system, and give light to his own worlds?"

7. Oh, what a wonderful contemplation! Look into the heavens by night, and think that each of the innumerable stars, (the telescope takes in 80 millions) is, like ours, a flaming sun; and that each, like ours, has his attendant train of worlds, to which he gives heat and light.

8. How does the incomprehensible power of the great Creator overwhelm the mind, when we reflect that, whilst he is guiding this earth, the comets, and the planets in their wheeling courses, his infinite power and unwearied mind is regulating, at the same time, the innumerable worlds which, in countless glory, fill the firmament of heaven!

9. Nor is this all—for where is the boundary of creation? Let imagination take its flight, and visit the remotest stars which glimmer in the sky, and still look far beyond from thence! There is no end! Another boundless firmament spread out and span-

5. "Pas, ham kyunkar kahen, ki Ye sitāre náhaq banāe gae hain? Yá, ki Ḳhudá un ko hastí men láyá, faqat sunsán kí wirání ko befáidah roshní pahunchāne ko?"

6. "Jab hamāre áftāb ko hashmat ke sáth dekhte hain, to kyún na samjhen, ki har ek sitārah, *isí tarah* kí shabānah hashmat rakhtá hai? Kyún na ho, ki har ek sitārah apne apne nakshe ká markaz hoke, us naqshe wāle saiyáron ko roshní pahunchátá ho?"

7. *Subhán Alláh!* us ká kyá achchhá dhiyán hai! Rát ko ásmán kí taraf dekhke, ghaur karo, ki jitne sitāre durbín ke wasíle se nazar áte hain, we áth karor hain! Un men se, ek ek is roshan áftāb kí tarah par hai; aur har ek, is áftāb ke muwáfiq, apne apne jilau men, saiyáron ko rakhtá hai, aur un ko garmí aur roshní detá hai.

8. *Buzurg Ḳháliq* kí beqiyás qudrat idrák ko parágandah kartí hai! ki wuh ek dam men zamín, aur zú-zandbe, aur saiyáron kí rahnumái gardishon men kartá hai! Aur beniháyat iḳhtiyár se, aur athak dil se, baṛe, baṛe, be shumár sitáron ko, jo kí áftāb men niháyat jalál se bhare hue hain, tartíb detá hai!

9. Balki, iske bhí siwá bát is já par hai, ki masnuát *Iláhi* kí intihá nahín páí játi hai! Ḳhiyál par már-ke durtarín sitāre tak já pahunche! phir us se dur talak áge dekhe; intihá nahín páwegá! Aurí-hí beniháyat gardún phaile hue, aur beshumár

gled with innumerable suns ! But vain the thought to overtake the limit of creation.

10. "Who by searching can find out God? Who can find out the Almighty to perfection?" "Lo, these are parts of his ways; but how little a portion is heard of him. The heavens declare the glory of God, and the firmament sheweth his handy work."

11. The fixed stars all remain stationary in the heavens; and we can distinctly trace the planets moving from one constellation to another, from fixed star to fixed star, in passing on their journey round the sun.

12. Suppose, for a moment, that God should withdraw his continual superintendence from the vast complication of revolving worlds, how dreadful would be the consequence!

13. Instead of each keeping its appointed place, with dreadful crash one would reel against another, and utter chaos follow.

14. Man is humbled, and feels his own insignificance in the scale of creation, when he reflects that this earth, which he inhabits, instead of being the only work of the Creator, is merely an atom in his creation.

áftábon se chamakte hue milenge ! Aur jo koí cháhe, ki masnúát Iláhí kí niháyat páwe, yih k̄hiyál k̄hám hai.

10. “ Kaun just o jū karke *Alláh kī qudrat* ko pá saktá hai ? Aur kaun *K̄hudá kī kamálát* ko daryáft kar saktá hai ? ” “ Dekho, *K̄hudá* kí ajáibát men yih ek zarrah hai ; aur uskí zát *pur kamál* ke muqábalah men qadr qalíl daryáft hotá hai. *Falak*, *K̄hudá* kí *buzurgí* ko záhir kartá hai ! Aur *gardún* se uskí sanāten málum kí játí hain.”

11. *Sawábit* sab ásmán men sákin rahte hain ; aur saiyáron ká guzarná, ek ek sawábit ke pás se, burj-on ke bích men, sáf dekhá játá hai, aur apní apní gardish men chalte hain.

12. Jáno, agar *K̄hudá* lahzah bhar in ghumte ijrám kí nigahbání chhoṛ dewe, to kyá kyá k̄haufnák an-jám howe !

13. Sab, apní apní muqarrar jagah ko chhoṛkar, ek dusre se niháyat dhaṛáke se takkar kháwen, aur bilkul abtar ho jáwen !

14. Is bát ke dhiyán karne se, ki yihí zamín, jis par ham baste hain, kul masnuát *K̄hudá* kí nahín hai, balki *ek zarrah bhar* hai sáre masnuáton men, insán ko k̄háksarí átí hai !

15. And were a rushing comet to strike us in its path, and annihilate our earth, with all its inhabitants, its loss would be comparatively no more felt than would be the fall of a leaf from the forest.

16. This little ball, our earth, may be compared, then, to a mere platform, or point, erected in the midst of space, from which we cast a surveying glance, and contemplate the wonders of creation*. The innumer-

* How many sublime thoughts and refined pleasures does the vacant, uninstructed mind lose, when looking on the heavens, the glorious works of the Almighty. The Poet has well expressed his mind, when roused by such a contemplation to address the Deity :

“ O thou the great Invisible !

Divine Instructor ! thy first volume this,

The heavens ! for man's perusal, all in capitals !

In moon and stars, Heaven's golden alphabet !

Emblazed to seize the sight ! Who runs may read ;

Who reads, may understand. 'Tis unconfin'd

To Christian land or Jewry, fairly writ

In language universal to mankind.

A language lofty to the learned, yet plain

To those that feed the flock, or guide the plough,

Or from the husk strike out the bounding grain.

A language, worthy the great Mind that speaks !

Stupendous book of wisdom to the wise !

Stupendous book ! opened, O God, by thee !”

Another Poet has thus beautifully expressed the words of the sacred writer.

“ THE spacious firmament on high,

With all the blue ethereal sky,

15. Aur agar ek zú-zanábah, apne chalne men, zamín ko takráke, báshindon ke samet, níst nábud kar dále, to us ká nuqsán boná sáre masnuát men, jaisá ek pattí ká girná jangal men se.

16. Pas, is chhoṭe gend zamín kí tamsíl ek chabutraḥ ke sáth bajá hai, ki barpá kiya gayá hai sunsán men, ki us par se, ham Kḥudá kí ajáibát ko dekhte haiṇ. Ye beshumár Dunyá, jo upar

And spangled heavens, a shining frame,
 Their *Great Original* proclaim !
 The unwearied sun, from day to day,
 Does his *Creator's* power display ;
 And publishes to every land
 The work of an *Almighty* hand.
 Soon as the evening shades prevail,
 The moon takes up the wondrous tale,
 And nightly to the listening Earth
 Repeats the story of her birth ;
 While all the stars that round her burn,
 And all the planets in their turn,
 Confirm the tidings as they roll,
 And spread the truth from pole to pole.
 What though in solemn silence all
 Move round this dark terrestrial ball ?
 What though no real voice nor sound,
 Amidst their radiant orbs be found ?
 In reason's ear they all rejoice,
 And utter forth a glorious voice ;
 For every singing, as they shine,
 The hand that made us is Divine."

able worlds above, beneath, on every side, proclaim the inconceivable power and awful attributes of God, that mysterious Being, who, hid from our eyes, has made and superintends the whole.

17. The fixed stars are inconceivably distant from us : no human calculation can measure them. The nearest is farther than a cannon shot could fly in seven millions of years !

18. Their great distance is proved thus. Suppose four or five trees upon a plain, in front of you ; they would appear at a certain distance from each other.

19. But if you go for a mile or two to the right or left, and then look at them, they will all have changed their relative positions.

20. Not so the fixed stars, for though the extremities of the earth's orbit are 162 millions of miles apart, the fixed stars, viewed from either extreme, appear exactly in the same situations.

21. So that, supposing that the whole orbit of this earth, 162 millions of miles in diameter, (that is, the space encircled by her journey round the sun,) were a vast globe of fire, it would appear only as a point when viewed from any fixed star !

nícbe, aur har taraf par hain, *Alláh* kí, ki jo hamárá nazar se poshídah hai, aur in sab ko banáke nigahbání kartá hai, beqiyás qudrat, aur haibat nák sanāton ko záhír karte hain.

17. Ye Sawábít kí durí zamín se, samajh men nahín átí hai: koí ádmí isko náp nahín saktá. Sattar lách baras men, jitní dur top ká golá jáegá, nazdíktarín sitárah us se bhí dur hai?

18. Istarah sábit hotá hai ki sitáre barí dúr hain. Jáno kih chár páñch darakht maidán men dekhne wále ke sámhne, ek dusre se, kuchh tafáwat par nazar áwenge.

19. Lekín, ek ádh kos dahine yá báen jákar dekho, to tumhen málúm hogá, ki har ek peṛ kí jagah, banisbat dusre peṛ kí, badal gaí.

20. So sawábit ká hál is tarah par nahín hai, kyunki, zamín ke daure se, jis sire se dekho, to sitáre apní usí aglí jagah par, nazar áwenge, agarchih ek sirá, dusre sire se solah karor bís lách mails dur hai !

21. Farz karo, ki zamín ká daurá, ki jiske qutr kí lambái solah karor bís lách mails hai, agar us daure kí wusát bhar ág ká gumbaz ho jáwe, to kisi sawábit par se, faqat ek nuqtah ke barábar nazar áwegá.

That the planets and other worlds are inhabited; is most probable from the following considerations.

1. In many of those planets, or worlds, we have discovered movements similar to those of the earth.

2. They all move round the sun, all receive light from him; they, like the earth, turn on their own axis, and have day and night, and changes of seasons.

3. It is highly improbable that the great and mysterious Maker of all, who does nothing in vain, should give to those worlds, the laws and motions peculiar to this earth, day and night, light and darkness, unless they were inhabited.

4. It is contrary to reason to suppose those vast worlds to be desolate and void. Why should we suppose that the Supreme Creator had alone peopled, with his worshippers, this little planet of ours?

5. Why should such a magnificent train of attendants, as four moons, have been given to the immense world Jupiter, 1,000 times greater than ours, continually to revolve round him, had he been only a desolate mass of matter?

6. Why should life and intelligence be confined to this our planet? Saturn, because of his amazing distance from the sun, has no less than seven moons revolving round him to give him light.

*Zail kī báton se aghlab fahm hotá hai kī Saiyáre
ábád hai.*

1. Bahut Saiyáron kī barkát, is zamín kī harkát ke muwáfiq málum huí.

2. Yih sab áftáb ke gird ghúmte hai; us se sab mustanír, yáne roshan, hai. We, zamín ke muwáfiq, apní apní mihur par ghúmte hai; aur un ká din, rát, aur mausimon ká inqiláb hai.

3. Yih bát nibáyat khiláf qiyás hai, ki wuh buzurg, achchhá Kháliq, ki jo kisi chíz ko ábas paidá nahín kartá hai, in jirmon ko, is zamín kī mánind qáide, aur barkát, aur roshní, aur táríkí, aur din, aur rát dekar ábádí na dí ho !

4. Yih bát samajhná khiláf áql hai, ki we bare bare ijrám wírán aur kháli hai. Ham is bát ko kyunkar samjhen, ki *Alláh Tálá* ne faqat is hamáre chhoṭe Saiyáre ko apne bandon se ábád kiyá hai ?

5. Bará Saiyárah *Mushtri*, jo ki zamín se hazár gunná dal men bará hai, agar wuh wírán hai, to kis wáste usko ek ázímushán hashmat chár chánd kī dí gai hai, hameshah gird uske ghúmne ko ?

6. Hamáre is Saiyáre ko faqat ahl i hayát, zí áql, káhe ko diyá gayá hogá ? Zuhál, ki wuh bahut dur hai súraj se, sát chánd se kam nahín rakhtá hai, ki uske gird ghúmne wále, aur roshní dene wále hai.

7. He has also his ring, supposed to reflect the sun's rays upon him. Can it be imagined that all these stupendous and wonderful arrangements would have been made by the Almighty Creator, who does nothing in vain, or without a cause, merely to afford light to a dreary solitude?

8. Whilst upon this our planet we find matter teeming with life and animal variety, all subservient to man, why in other worlds or planets should we suppose matter to exist alone?

9. Why resist the conclusion, that, in those worlds, as in this, there is the same variety of animal life? that there, as here, the Almighty has placed his intelligent worshippers?

10. The world Mercury is near to the sun, and requires no moon to light it; the next distant, is Venus, without a moon; we revolve next, and being further distant, one moon accompanies us, and gives us light.

11. Jupiter, being four times more distant from the sun and light, and 1,000 times larger than our globe, has four moons to give him light. Saturn again, farther off, has seven moons and two rings. Georgium Sidus, or Herschell, also has six moons. Why, therefore, all this arrangement, unless that there, as here, life and intelligence exist?

7. Wuh ek halqah bhí rakhtá hai; aur mafhúm hotá hai, ki áftáb kí kirnon ke aks zuhal ke gird pahunchátá hai. Kyunkar koí samjhe, ki Alláh, jo kisi chíz ko ábas aur besabab paidá nahín kartá hai, yih sab barí achambhí tartíben masnuát kí, faqat ek sune wírání kí roshní ke wáste dí hai?

8. Jáb ki hamáre is Saiyáre par, tarah batarah ke ahl i hayát, sab insán ke tábe, nazar áte hain, to káheko samjhen, ki aur Saiyáron men faqat máddah *bejân* howe?

9. Pas, is natíje ko kyun na qabúl karen, ki aur saiýáron men, mánind is Saiyáre kí, rang barang ke zí hayát maujúd hain? aur wuhán bhí, Alláh ne mudrik bandon ko rakhá hai?

10. *Utárid* ká jirm áftáb ke nazdík hai, aur usko roshan karne ko, koí chánd darkár nahín thá; iske bád dusre darjah wálá, *Zuhrah* baghair chánd ke hai. Bád uske, *Zamín* ká daurah hai, aur chunki yih dúrtar hai, ek chánd hamráhí ke wáste, roshní dene wálá usko milá.

11. *Mushtri*, banisbat zamín kí, chár gunná dúr hai áftáb se, yáne masdar roshní se, aur zamín se házár gunná barí hai, iswáste, char chánd diyá gayá usko roshan rakhne ke wáste. Phir, *Zuhal* us se bhí dur hokar sát chánd aur ek halqah payá hai. Jeorjiyam Saidas, yáne Harchill, bhí, chhah chánd rakhtá hai. Pas, agar is zamín ke muwáfiq in Saiyáron men ábádí na howe, to yih sab tartíbát káheko howe?

1. He who is acquainted even with the outlines of Astronomy, has no longer mean ideas of God, the great Creator of the Universe.

2. The enlightened mind takes an extended view of the stupendous works of the Deity, and reads, as it were, in the heavens, the awful grandeur of his character.

3. It is said of an intelligent Indian, who used to worship idols and rivers, instead of the eternal and omnipotent Deity, that when the darkness of his mind had been dispelled by reading upon such subjects as these, he frankly acknowledged the absurdity and pitiable ignorance of worshipping graven images and rivers, instead of the Eternal.

4. "I," said he, "seeing all around me falling down to worship stones, fell down likewise; but now, I would as soon think of worshipping, or praying to the fowls of the air, or fishes of the sea!"

Astrology.

1. In England, some centuries ago, even otherwise sensible men believed in Astrology,—believed that men's destinies could be read from the stars: but as light in a dark room dispels darkness, so did the study of Astronomy dispel Astrology. No well-informed mind now can retain for a moment any belief in it.

1. Jo Shaḡhs, ki ʔlm i Haiat se wáqif hotá hai, Alláh ko ʔzímulqudrat gintá hai.

2. Roshan zamír shaḡhs Alláh Tálá kí buzurg musnuʔt par kushádah nazar rakhtá hai:—goyá uskí *bayának buzurgí* ko, *alfák* kí kitáb meṇ, mutálá kartá hai !

3. Naql hai, ki ek dāná Hindu murat aur dariyá ko abadí aur qádir samajhke pujtá thá. Jab ki is ʔlm kí bāton parḡhke dil kí táríkí dur huí ; tab usne safáí dil se iqrár kiyá, ki *inko* pujná ʔwaz meṇ *Khudá* ke, mahaz behudagí aur nádání hai !

4. Wuh bolá, ki “Main jo sab ko patthar ke sámhne girte dekhá thá, main bhí girtá thá ! lekin, *ab* mere nazdík *murat* aur *dariyá* ká pujná, aur machhlí aur chiriya ká pujná, barábar hai !”

ʔlm Najum ke bayán meṇ.

1. Inglistán meṇ, kaí ek chande guzre, ki báze insán, jin ko aur báton meṇ aql thí, ʔlm Najum ko mánte the, ki ádmíon kí qismat Sitáron se málum notí thí: magar roshní ká áná, jaise andhere ghar meṇ táríkí ko dūr kartá hai, waisáhi ʔlm Haiat ne ʔlm Najum ko dūr kiyá. Ab koí ahl i waquf ek pal bhí us par ʔtibár rakh nahín saktá hai.

2. In India the belief in Astrology is so prevalent, that thousands are slaves to it; they cannot undertake a journey, or build a house, without consulting the astrologers.

3. Men are jealous of restraint, yet place themselves under the guidance of a crafty astrologer, who, whilst he rifles their pockets, laughs within himself at their credulity.

4. Ignorance is the prolific mother of many errors : the well-informed know that the planets, like ourselves, are obedient to the laws of God, and move wherever he has commanded them : he alone determines our fortunes.

5. There are many poor ignorant men, who, in order to obtain a livelihood, pretend to read the destinies of others in the firmament of Heaven, and like jugglers exercise their calling.

6. Because of the avidity with which the human mind seeks to penetrate the future, it is no wonder that the ignorant give ear to those who boldly pretend to divine men's fortunes from a source so mysterious, and which few have knowledge enough to investigate.

7. There is a Persian story, which shews the folly of Astrology in a ludicrous, though just point of view, and is worthy of being quoted here.

2. Hindustán men İlm Najum ká aisá riwáj hai, ki hazáron ádmí uske bande hain ; we kisí safar ko nahín játe, aur kisí imárat kí buniyád nahín qálte, jabtak ki ahli Najum se maslahat na púchhen !

3. Harchand insán farmánbardári se nákhush hai, lekin makkár munajamon kí ráhnumái ko, jo unká ropaiyah paisá thag leke unke bhuláe par, apne dil men hanste hain, qabul karte hain.

4. Nádání bahut khataon kí mádar i kasíru^l aulad hai: dání log jánte hain, ki saiyáre hamári mánind Khudá ke hukm ke tábe hain, aur uske hukm ke bamujib chalte hain. Faqat Alláh Tálá hamári qismat ko thaharatá hai.

5. Bahut gharib nádán Najumí hain, ki apne rozgár ke wáste sitárah shinási ká dáwá karte hain, aur Yahán mittí ke muwáfiq is peshe ko járí karte hain.

6. Insán ká dil álim i ghaib ke dariyáft karne ká shauq rakhtá hai. Pas, kuchh tájjub nahín ki nádán ádmí un logon kí báton ko sune, ki jo qismat ke batláne ká dáwá be muhába karte hain, aise ma^{khfi} masdar se, ki jiská hál qhundhne ko thore admí láiq hain.

7. Ek Fársí hikáyat hai, ki jo İlm Najum kí behúdagí par wájibí hansí látí haí, aur is maqám men uská likhná sazáwár hai.

8. "An Astrologer returned one day to his own house, and found a stranger seated with his wife, giving her so much abuse, that both were fighting to the disturbance of the whole neighbourhood.

9. "A wise man reflecting upon this, said to the Astrologer, How canst thou tell what is in the firmament of heaven, seeing that thou knowest not what is in thine own house?"

10. A king of Babylon, who dreamed a remarkable dream, thus detected the ignorance of all the Astrologers of his kingdom: he commanded them to tell him both the dream and the interpretation.

11. As they could not do the first thing the king required, he concluded they could not do the last, and therefore proposed to put them to death as deceivers and defrauders of mankind.

12. He, who has emerged from darkness to light, leaves those to grope about whom he has left behind.

13. He, who is acquainted with the wonders of Astronomy, leaves the dreams and errors of Astrology to the ignorant.

14. He, who has thrown off his chains, values liberty too much to put them on again; over him the incantations and predictions of priests, and dreamers, and Astrologers have no power.

15. When we discover a few great errors in a man's opinions, we cease to respect his judgment

8. Ek najumí, ek din, apne ghar áyá, aur ek begánah ádmí, apní bíbí ke pás, baiṭhá páyá, jo usko is qadr gálí detá thá, ki donon kí laráí se tamám paṛosí díq ho rahe the.

9. Ek sáhib-dil ne, is bát ko ghaur kar, najumí se kahá, ki, Tú, jo nahín jántá ki tere ghar men kaun hai, kyunkar kah saktá hai ki ásmán par kyá hai?

10. Bábal ke ek Bádsháh ko ájab tarah ká khwáb huá thá, so usne apne mulk ke sab Najumon kí nádání istarah pakar lí: usne unko hukm diyá, ki Tum hamará khwáb batláo, aur uskí tábir.

11. Jo pahlá hukm Bádsháh ká thá un se na ho saká, pas, usko málum huá, ki un se dusrá bhí adá na hogá; aur unko insánon ke daghá dene-wále samajh-ke hukm diyá, ki we qatl kiyá jáwen.

12. Jo shaḡhs ki táríkí se chhuṭke, roshní men áyá, un logon ko, jo táríkí men rah gae, ṭaṭolne ko chhor detá hai.

13. Lekin, jo shaḡhs ki ĩlm Haiat ke nádírát se ágáh huá, wáste nádánon ke, ĩlm Najumí^{astrog} ká dhoká aur chuk chhor detá hai.

14. Azádagí is qadr ázíz hai, ki jis ádmí ne apní zanjír ko dúr kiyá, phir kabhí nahín us men pánw rakhegá. Mullá, aur wubmí, aur najumí ke jhár phunk, aur fálgoí, uske nazdíq behudah málum hoge.

15. Jab kisi ádmí kí tujwíz men *kaí ek burí khatá páí gain*, to uskí firásat ká itibár sab báton men játa

in other matters, and subject all his assertions and instructions to the scrutiny of examination.

16. When we find a man teaching us to believe in Astrology, in lucky and unlucky days, we may be pardoned for smiling at his ignorance, and throwing off the shackles of his tuition in other matters, as well as these. Our own judgment has become superior to his, and we must follow its dictates, not his.

The Benefit of Astronomy to Man.

1. The study of Astronomy enlarges the mind, as much as faith in Astrology enfeebles it. Astronomy leads the mind up to God, and fills it with sublime conceptions of his power and wisdom. On a due acquaintance with Astronomy depends the perfection of Navigation, Geography, Chronology, Commerce, and Dialling.

2. By the learned and useful calculations of Astronomers has the surface of our globe been measured with scientific accuracy ; the distances of kingdoms, capes, continents, and cities have been laid down in miles and furlongs ; and above all, by charts or maps, the great ocean is now every where intersected by the lines of science, and has become a well known highway for our fleets and navies.

rahegá, aur uská kahná aur nasíhaton ko; *be tahqíq*, *koí amal men na láwegá*.

16. Jab koí admí *İlm Najum*, aur nek aur bad dinon ko hamen sunáyá cháhtá hai, aur bút aur dariyá ko pujáyá cháhtá hai, to gustákhí máf, ham uskí nádání par hausenge; aur uskí tálím kí *zanjír* ko dúr karke, aur aur báton men bhí uskí aql se apní aql ko bihtar jánenge, aur *apní aql* ke bamujib chalenge, na *uske* kabne par.

Bayán Faidah pahunchne ke, insán ko, İlm Haiat se.

1. Jitná *İlm Najum* insán kí fahm ko nátawán kartá hai, itnáhí *İlm Haiat usko kushádah kartá hai. İlm Haiat dil ko Khudá kí taraf le játá hai*, aur usko *Khudá kí qudrat* aur *dánáí ke buland khiyá-lát* se bhartá hai. *İlm Haiat* ko khúb jánne par *jaház rání*, aur *Jughráfiyah*, aur *İlm Tawárikh*, aur *Saudágarí* kí kamálát mauqúf hain.

2. A'qilon aur káramadaní hisáb Sáhibán haiat ke se, yih bilkul ruí zamín, bahut thík hisáb, ilm ke sáth, nápí gai hai; aur tafáwut Bádsháhaton, aur Tápūn, aur Jazíron, aur Shahron ká, ba qáidah mail aur koss ke, hisáb kiyá gayá hai; aur aláwah, iske bawasíle! naqshe taiyár kíe hue sáhibán haiat ke; aur naqshah samundar azím, har jagah par, ilm ke márkon se bilkul paimáish huá, aur wáste jaházon ke ek mashhur sháh ráh ho gayá.

3. By the knowledge of astronomy, the mariner is enabled with his compass to guide his ship through the trackless ocean, without an object to direct his path, except the sun by day, and the moon and stars by night.

4. Thus the various productions of India, as cotton, indigo, sugar, silks, spices, saltpetre, ivory, precious stones, &c. are carried to Europe.

5. And India receives in exchange the treasures of Europe: cloth, lead, metals, telescopes, watches, mathematical instruments, steam engines, machinery of every kind; and, above all, the wisdom of the best books, teaching science and virtue, for knowledge in which, the European nations are famed.

6. But for Astronomy, the pathless ocean would be a barrier between the nations of the world, and the distant inhabitants of the earth never would have met.

7. Duly instructed in this science, the adventurous mariner launches his ship into the deep, laden with all the commerce, varieties, luxuries, animals, and inventions of foreign lands.

8. And boldly spreads his sails to the breeze, and guided only by his compass, and the sun, and the moon and stars of heaven, he weathers many a midnight storm, a solitary wanderer in the unfathomable deep, until at length he reaches the far distant port.

3. *İlm Haiat* ke jánne se náḡhudá apne jaház ko, qutb numá leke, *Samundar be ráh* men, chalá saktá hai ! aur usko ráh dekhláne-wálá nahín hai, magar *áftáb* din ko, aur *chánd* aur *sitáre* rát ko !

4. Isí tarah *Hindustán* ke bahutsí hásilát, yáne jaise *ruí, níl, misrí, resham, masálah, shorah, háthí-dánt, jawáhirát* waghairah, ládke Farangistán ko játi hain.

5. Aur *Hindustán*, badle men un chízon ke, taháyaf Farangistán ke pátá hai; yáne *banát, sísa, dháten, durbin, gharí, İlm riyázi ke álát, stím enjin*; aur aláwah, har qism kí álát, aur sab se muftdar *kitáben*, jo ilm aur nekí kí síkháne-wálí hai, kí in do chízon men mumálik Farang námđár hain.

6. Agar *İlm Haiat na hotá*, to samundar be ráh *mulk, mulk ke admion ko judá rakhtá*, aur zamín ke báshindon men, jo ek dusre se dur, dur, mulkon men hain, unhon men muláqát na hone pátí.

7. Is fan men waquf páke, náḡhudá apne jaház par, begáne mulkon ká saudá, áish, jaish ká asbáb, haiwánát, aur nayí garhat kí chízen ládke, samundar men nidharak usko chalátá hai.

8. Aur wuh pálon ko hawá par le macháyá chařátá huá, faqat qutb numá, suraj, chánd, aur sitáre kí ráhnumái se, be intihá samundar ke bích men, tan tanhá, ráton ke túfānon se bachke nikalkar, áḡhir apne dur bandar maqsud ko pahunchitá hai.

THE SOLAR SYSTEM,

Arranged in a new and familiar manner, so as to enable youth to comprehend more clearly the relative magnitude and distance of its parts,
By R. W.

A Table shewing the relative Magnitudes of the Sun, the Moon, and the Planets; also the relative Distances of the Planets from the Sun and the Moon, and from the Earth, together with their Orbits and periods of Revolution, assuming the magnitude of the Earth to be that of a Globe 12 inches in diameter.

	Diameter.		Circumference.	Mean Distance.		Orbit or Course round the Sun.				Annual Revolution or Time of completing its Orbit.			
	Feet.	Inch.	Feet.	Inch.	Feet.	Miles.	Furl.	Yds.	Ft.	Hours.	Min.	Sec.	Th.
Sun,.....	111	72 350	104							29218 equal to 5 4 59 1	0	16	0 45
Mercury,	0	4 1	34		4648 equal to 7 9 1					54601	10 2 160 1	0	40 54 0
Venus,.....	0	11 3	04		8686 1 5 35 1					75491	14 2 83 2	1	6 29 0
The Earth,.....	1	0 3	12		12008 2 2 42 2					115035	21 6 65 0	2	5 2 18
Mars,.....	0	6 1	74		18297 3 3 159 0					179048	35 7 62 2	4	3 2 26
Vesta,.....	nearly	0	1		28496 5 3 38 2					208719	39 4 53 0	5	6 5 23
Ceres,.....	0	1 1	43		33203 6 2 67 2					200935	38 0 98 1	4	49 36 5
Juno,.....	0	2 2	0		31906 6 0 75 1					208282	39 3 127 1	5	6 6 46
Pallas,.....	0	3 1	104		33515 6 2 171 2					392758	74 3 19 1	13	8 16 46
Jupiter,	11	3 35	5		62478 11 6 146 0					720158	134 3 32 2	32	36 11 13
Saturn,	9	11 29	114		114570 21 5 130 0					1440473	272 6 17 2	92	56 43 52
Herschell,	4	5 13	114		229166 43 3 48 2					Orbit or Course round the Earth.			
The Moon,	0	3 1	0		304 ft. 3 in. 5 in.					304 ft. 3 in.—68 yds. 3 in.	5	22	1

Table shewing the Distance of the Planets from the Sun, their sizes, rate of travelling, &c.

Names of the planets.	Distance from the sun.	Diameter.	Rate of travelling per hour.	Time in performing their journey round the sun.	Time of revolution on their own axis.	Number of moons or satellites attending them.	Time that a cannon shot would take in reaching them from the sun.
Mercury,	37 million of miles,		95000 miles	67 days, 23 hours,			8½ years.
Venus,	68 ditto ditto,	7867 miles,	80995 do.	244 do., 16 hrs. 49 mns.	23 hrs. 21 mns.	...	16 do.
The Earth, ...	95 ditto ditto,	8000 do.	68856 do.	365 do., 6 hrs.	24 hrs.	One	22½ do.
Mars,	144 ditto ditto,	4189 do.	...	688 days, 25 hrs., 30 mns.	24 hrs., 39 mns.	...	34 do.
Ceres, ...	260 ditto ditto,	165 do.	...	4 yrs. 221 days, 16 hrs., 9 secs.	22 secs.	...	61 do.
Pallas, ...	266 ditto ditto,	30 do.	...	4 yrs., 7 mths. 11 days,	...	...	62 do.
Juno, ...	300 ditto ditto,	...	...	4 yrs., 128 days.	...	...	70 do.
Vesta, ...	...	...	...	3 yrs., 66 days, 4 hrs.	...	...	...
Jupiter,	490 ditto ditto,	89170 do.	25000 do.	11 yrs., 314 days, 12 hrs.	9 hrs. 55 mns.	Four	118 do.
Saturn,	900 ditto ditto,	67000 } or } 79000 }	...	23 mns. 9 secs.	37 secs.	Seven	215 do.
Georgium Sidus,	1800 ditto ditto,	35112 do.	7000 do.	30 years.	10 hrs., 6 mns. 2 secs.	Six	431 do.

VOCABULARY.

ABSURDITY,	Behúdagí.
Account,	Bayán, ahwál, hisáb.
Acknowledge, (To)	Iqrár karná.
Action,	Kám.
Air,	Hawá.
All,	Sab.
Almighty,	Ḳhudá, qádir i mutlaq.
Amazing,	Ajáib, téjjub.
And,	Aur.
Animal,	Haiwán.
Annihilate, (To)	Nest, nábud karná.
A. D. Anno Domini,	San Ḳsáwí.
Answer,	Jawáb,
Appears,	Nazar áta hai, námud hotá hai.
Appointed,	Muqarrar huá.
Arrange, (To)	Intizám karná.
Ascertain, (To)	Daryáft karná.
Around,	Aspás.
Assert, (To)	Kahná.
Astrology,	Najúm.
Astronomy,	Ḳlm i haiat, sitará shinásí.
Attended,	Házir huá.
August,	Buzurg, bará ; nám ek mahine ká.
Avidity,	Bahut shauq se.
Awful,	Haibatnák, haulnák.
Awe,	Ḳhauf, adab.
Axis,	Mahúr.

BALLOON,	Ghubárah.
Beast,	Haiwán.
Beautiful,	Khúbsurat.
Because,	Kyugki.
Breeze,	Hawá.
Being,	Shakh, maujúd, hastí.
Beginning,	Nayá, shurú.
Belt,	Dábah, halqah.
Big,	Bará.
Bird,	Chiryá.
Blue,	Nílá.
Bodies,	Ijrá, tan, ajsám.
Boldly,	Bemuhábá, jawán mardí se,
Borrowed,	Ariyatan, udhár lená.
Brief,	Mukhtasar, chhotá, khulásá.
Brightest,	Raushan-tar.
Brilliant,	Chamakdár,
Build,	Banáná, támír.
By,	Se, márifat.
CALM,	Ghairmuharrik, árám
Cannon,	Top.
Car,	Gárfí.
Centre,	Markaz, bích.
Certainly,	Tahqíq, beshak.
Christian,	Ísáí.
Chronology,	Ílm i tawáríkh.
Close,	Nazdík.
Cloth,	Bánát, kaprá.
Cloud,	Bádal.
Comet,	Sitárah dumbálahdár.
Comparatively,	Nisbatí,
Commerce,	Saudágari.
Compared,	Andázah, muqábil kiyá gayá.
Complication,	Pech darpech.
Compass,	Qutab numá, pargár.

Conceive,
Cotton,
Conclude,
Conclusion,
Considered,
Contemplation,
Contrary,
Crafty,
Creator,
Crowd,

DAILY,
Darkness,
Day,
Death,
Deceiver,
Declare, (To)
Deep,
Defrauder,
Deity,
Despise,
Desolate,
Destinies,
Divided,
Diameter,
Dialling,
Disk,
Disturbance,
Distance,
Down,
Dream,

EARTH,
Eclipses,
Emerged,
England,
Enormous,

Daryáft, k̄hiyál kar.
Ruí.
Qiyás men áná, natíjah nikálná.
Anjám.
Tajwíz kiyá.
Sochná.
Baraks, k̄hiláf.
Makkár.
K̄hudá, paidá karne wálá.
Hajum.

Rezmarrah.
Andherí, táríkí.
Din.
Maut.
Daghá dene wálá, daghábáz.
Záhir karná.
Gaihrá, samundar.
Daghábáz, nuqsán dene wálá.
K̄hudá.
Nafrat, kamínah samajhná.
Wírán.
Qismat, nasíb.
Taqsim kiyá gayá.
Qatar.
Ílm i daryáft waqt i áftáb.
Mandal.
Tasdíq, harakat.
Durí.
Níche.
K̄hwáb, sapn.

Zamín
Grahan, gahan.
Nikálá gayá.
Inglistán.
Bahut bará.

Enlightened,

Erected,

Eternal,

Europe,

Evening,

Every,

Examination,

Exist,

Expose, (To)

Extended,

Exactly,

Eye,

FALL, (To)

Fallen,

Fear,

Feel,

Fiat,

Field,

Figures,

Finish,

Firmament,

Fixed,

Flat,

Flight,

Fly, (To)

Foreign,

From,

Formed,

Fowls,

Frankly,

Fighting,

Free,

Full,

GARNISHED,

Geography,

Tābān, raushan.

Barpā kiyā gayā, tāmir kiyā gayā.

Abadī.

Farangistān, vilāyat.

Shām.

Har ek.

Tahqíqát.

Maujud.

Zāhir karná, khulá rakhná.

Kushádah, daráz.

Thík, Biṣinihi.

Aṅkh.

Girná.

Girá huá.

Dar, Khauf

Chhuná, málum karná.

Hukm.

Maidán.

Shakl, Súrat, Handasah. .

Tamám karná.

Gardúp, ásmán.

Sawábit, Qáim.

Musattah, chaptá.

Firá.

Uṛná.

Ajnabí.

Se.

Banáyá gayá, murattab.

Murgh.

Safáí dil se, khálishpan se.

Laṛáí.

Azád.

Purá, bhará.

Arástah.

Ilm i arz.

Glimmer,	Kam chamak.
Glory,	Jalál, faḡhar.
God,	Ḳhudá.
Grandeur,	Shaukat, buzurgí.
Guide, (To)	Rahnumáí, ágáhí dená.
HANG, (To)	Laṭkáná.
Half,	Adhá.
Hand,	Háth.
Handy-work,	Dastkárí.
Hath,	Hai.
Heat,	Garmí.
Hills,	Pahār.
Him,	Use.
His,	Us ká.
House,	Ghar, imárat.
How,	Kaisá.
Human,	Insání.
IF,	Bashartíkah, agar.
Ignorancé,	Ahmaqí, nádání.
Illustration,	Bayán.
Imagination,	Ḳhiyál.
Immensity,	Niháyat.
Incomprehensible,	Beqiyás.
Incantations,	Tilsam, síhar, jádú.
Indigo,	Níl.
India,	Hindustán.
Innumerable,	Beshumár.
In so much,	Is qadr.
Instrument,	Alát, Sáz.
Insult, (To)	Tānah karná, gustákhí karná.
Intelligent,	Dáná, ḡhabardár.
Interpretation,	Tarjumah, bayán.
In vain,	Behudah, abas.
Invariably,	Ghair mubaddil, hameshah.
Inventions,	Ijad.

Invisible,
Incircled,

JUDGMENT,
Juggler,

KEEPING,
Kingly state,
Know, (To)

LANDS,
Large,
Lead,
Light,
Like,
Luminary,
Livelihood,
Lucky,
Luxuries,

MARINER,
Mathematical,
Matter,
Million,
Men,
Mercury,
Moon,
Metals,
Much,
Mysterious,

NAVIGATOR,
Neighbourhood,
Never,
New,

OBEDIENCE,

Benamud, ná-dídah.
Mahásarah kiyá gayá.

Tajwíz, fatwá.
Bázigar.

Rakhná.
Shaukat sháhánah.
Jánná.

Zamín.
Bará.
Shíshah.
Raushan.
Muwáfiq, mánind.
Raushan dene wálá.
Rozgár, rozí.
Khush nasíb.
Tuhfaját.

Nákhudá, musáfir i samundar.
İlm riyází.
Báıs, khulásah,
Das lákh.
Admí.
Utárid.
Chánd.
Dhát.
Bahut.
Ajíb.

Ahlí jaház.
Pařosí.
Hargiz nahín.
Nayá.

Itáat, tábídáрі.

Ocean,
Omnipotent,
Orbit,
Overwhelm,
Our,

PEA,
Peculiar,
People,
Perfection,
Perish, (To)
Picture,
Pitiable,
Plain,
Pocket,
Poor,
Precious,
Prediction,
Portion,
Pretend,
Prevailed,
Princely,
Proof,
Prevalent,

QUARTER,
Quoted,

RACE,
Ranged,
Rapid,
Rate,
Reason,
Regular,
Red,
Rifle,
Remarkable,

Samundar.
Qádar í mutlaq.
Daurah.
Aðalná, dabá dená.
Hamará, ham log ká.

Maṭar.
Kḥás.
Abád, log.
Kamál.
Halák honá, marná.
Taswír.
Qábil i rahm.
Maidán.
Jeb.
Gharíb.
Qímatí.
Peshgoí, durandeshí.
Miqdár, hissah.
Fareb dená.
Marauwaj.
Sháhánah.
Dalíl, gawáh.
Ríwáj, ráij.

Chautháí.
Kalám ghír ká láná.

Dúr.
Safisaf durust kiyá gayá.
Tez, jald.
Chál, ajúrah.
Aql, sabab,
Barábar, muwáfiq, qájdah.
Surkh.
Luṭ, chori
Ajíb tarah ká.

Resist,
Respect,
Rest,
Revolve, (To)
Revolution,
Right,
Ring,
River,
Round,

SALTPETRE,
Scale,
School,
Scrutiny,
Second,
Seems,
Seat,
Seated,
Sensible,
Sentences,
Shadow,
Shackle,
Shell,
Shines,
Short,
Shot,
Shout,
Silk,
Similar,
Sky,
Slowly,
Smaller,
Smiling,
Solar,
Solitary,
Source,
Space,

Sámhuá karná.
Tázím, iqtibár.
Sákin, má baqí, árám.
Ghumná.
Gardish.
Wájib.
Halqah.
Dariyá.
Gird, gol, áspás.

Shorah.
Tarázú.
Maktab.
Baḡhubí tahqíqát.
Dusrá.
Málum hotá hai.
Mahkamah, nishast.
Baithá.
A'qil, Aḡáh.
Jumlah, fiqrah.
Sáyah.
Juláná, berí.
Golá.
Chamaktá hai.
Chhotá.
Golá.
Nárah márná.
Resham.
Muwáfiq.
Asmán.
Ahastah.
Chhotá.
Hapná, muskaráná.
Shamshí.
Tanhá, akelá.
Chashmah.
Aṣrah.

Spangle,
 Speech,
 Speed,
 Speck,
 Spice,
 Spirit,
 Spinning-top,
 Stars,
 Stock,
 Stones,
 Storm,
 Stores,
 Straight,
 Street,
 Stranger,
 Strip,
 Studied,
 Stupendous,
 Sugar,
 Suppose,
 Surprising,
 Surveying,
 Sustain,
 Swift,

TAIL,
 Teeming,
 Telescope,
 Ten,
 Terror,
 Third,
 Though,
 Thus,
 Throw, (To)
 Times,
 Tower,
 To Travel,

Chamak.
 Kalám.
 Tezí, Jaldí.
 Nuqtah.
 Masálah.
 Rúh.
 Latṭu.
 Sitáre.
 Murat, punjí.
 Patthar.
 Tufán.
 Zaḡhírah.
 Sámhne.
 Kuchah, galí.
 Begánah, ajnabí.
 Nangá karná.
 Matálá kiyá, paḡhá.
 Baḡá, niháyat baḡá.
 Shakar.
 Qiyás karná, Bichárná.
 Mutájjib.
 Dekhná, Jánchná.
 Bardásht karná.
 Jald.

Dum.
 Bhará huá.
 Durbín.
 Das.
 Kḡauf, haulnákí.
 Tísrá.
 Agarchih.
 Aisá.
 Dálná.
 Dafah, martabah.
 Mínár, burj.
 Safar karná.

Tree,
Treasure,
Tuition,
Turn, (To)

UNIVERSAL,
Unfathomable,
Unlucky,
Upon,
Unseen,

VACANT,
Valleys,
Vault,
Velocity,
Venus,
Very,

WATCH,
We,
Weather,
Wife,
Whirling,
Wisdom,
Whole,
Workmanship,
Wanderer,
Worship,

YET,

Daraḡht.
Taháif, ḡhazánah.
Tálim.
Ghumná.

Bilkul, dunyáwí
Atháh.
Nahs, benasíb.
Par, upar.
Gháib, baghair dekhá.

Ḳhálí, ochhí.
Darah, khálá khálí.
Gumbaz.
Jaldí, shitábí.
Zuhrah.
Bahut.

Gharí.
Ham.
Hawá, áb-hawá.
Bíbí, jorú.
Ghúmná.
Aql, dánáí.
Sab.
Masnuát, mazdúrí.
Musáfir.
Ibádat.

Abtak.

POETRY.

“ STARS ! that on your wondrous way
Travel through the spangled sky,
Is there nothing you can say
To MAN ? No message from on high ? ”

“ YES ! methinks I hear you say,
Child of mortal race, ATTEND !
While we run our wondrous way,
LISTEN ! we would be your friend,
Teaching you that NAME DIVINE,
By whose mighty word we shine. ”

“ MAN ! as truly as we roll
Through the dark and distant sky,
You have an IMMORTAL SOUL,
Born to live when we shall die ;
SUNS and PLANETS pass away,
SPIRITS *never* can decay ! ”

“ When some thousand years at-most
All their little time have spent,
ONE by ONE, our sparkling host
Shall forsake the firmament,
WE shall from our glory fall,
You must live BEYOND US ALL ! ”

“ Oh ! then while your breath is given,
Let it rise in FERVENT PRAYER,
And beseech the GOD OF HEAVEN
To receive YOUR Spirit THERE,
Like a living star to blaze,
Ever to your SAVIOUR'S praise. ”

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